

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section J-A
Closure Plan
Appendix J-B - Closure Cost Estimate**

1.2 Inventory Management Assumptions

Clean Harbors makes the following assumptions concerning the disposal of its hazardous waste inventory:

- (a). The amount of hazardous waste on-site at the time of closure will be equal to the maximum permitted capacity of each waste management unit.
- (b). Based on historical operating data, each tank can be clean of waste and residue without entering the tank.
- (c). A local third party contractor will operate the Clean Harbors facility in order to perform closure.
- (d). 1 yd³ = 2000 lbs.
- (e). Liquid drums will be pumped and disposed offsite as bulk waste.
- (f). Empty drums will be sent offsite for recycling. No cost benefits are considered in this estimate.

1.3 Decontamination Assumptions

Clean Harbors makes the following assumptions concerning the decontamination of equipment:

- (a). The forklifts will be cleaned using detergents and/or solvents.
- (b). 500 gallons of contaminated rinseate will be generated during decontamination activities. This liquid will be bulked and sent off-site for disposal.
- (c). One (1) 55-gallon drums of contaminated debris (e.g., PPE, plastic sheeting, etc.) will be generated during equipment decontamination. Each drum will weigh 400 pounds.
- (d). The decontaminated equipment will be sold and/or sent to a scrap metal dealer. No cost benefits from this will be considered.

Analytical costs

Analyte	Water Cost/Sample (\$)	Soil Cost/ Sample (\$)
12 RCRA Metals	144	144
Volatile Organic Compounds	70	75
Semivolatile	120	150
Organochlorine Pesticides	75	80
Herbicides	95	100
Total	504	549

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2.1 Container and Tank Waste Disposal

TASK	SOURCE FOR QUOTE	QUOTE	TOTAL COST
Characterize, Load, Transport & Dispose Drummed Waste			
Liquid Fuel (52,360 G)	Systech (as bulk liquid)	\$.18/gal	\$9,425
Solid Fuel (635 DM)	Systech (as drums)	\$40.55/DM	\$25,749
Incineration (52,360 G)	WTI (as bulk liquid)	\$1.07/gal	\$56,025
Deepwell (34,925 G)	Texas Molecular	\$.91/gal	\$31,782
Supervisor- 16 manhours	Average contractor rates for area	\$62.50/hour	\$1,000
Pump drums/load drums (labor-32 manhours)	Average contractor rates for area	\$38.00/hour	\$1,216
Safety equipment- 6 man-days		\$100/man/day	\$600
Misc equipment - 2 day		\$600/day	\$1,200
SUBTOTAL			\$126,997
Characterize, Load, Transport & Dispose Tank Waste			
Liquid Fuel (46,628 G)	Systech (as bulk liquid)	\$.18/gal	\$8,393
Incineration (16,955 G)	WTI (as bulk liquid)	\$1.07/gal	\$18,142
Deepwell (21,196 G)	Texas Molecular	\$.91/gal	\$19,288
Supervisor- 8 manhours	Average contractor rates for area	\$62.50/hour	\$500
Pump drums/load drums (labor-16 manhours)	Average contractor rates for area	\$38.00/hour	\$608
Safety equipment- 3 man-days		\$100/man/day	\$300
Misc equipment - 1 day		\$600/day	\$600
SUBTOTAL			\$47,831
TOTAL			\$174,828

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2.2 Tank Decontamination

TASK	SOURCE FOR QUOTE	QUOTE	TOTAL COST
Decontaminate 8 Tanks			
Supervisor- 32 manhours	Average contractor rates for area	\$62.50/hour	\$2,000
labor-64 manhours	Average contractor rates for area	\$38.00/hour	\$2,432
Safety equipment- 12 man-days		\$100/man/day	\$1,200
Misc equipment - 4 days		\$600/day	\$2,400
Cleaning supplies			\$80
Analysis - 8 samples		\$504/sample	\$4,032
Deepwell (1,320 G)	Texas Molecular	\$.91/gal	\$1,201
TOTAL			\$10,945

Note: 185 gallons water generated per tank.

2.3 Equipment Decontamination

TASK	SOURCE FOR QUOTE	QUOTE	TOTAL COST
Decontaminate Equipment			
Supervisor- 8 manhours	Average contractor rates for area	\$62.50/hour	\$500
labor-16 manhours	Average contractor rates for area	\$38.00/hour	\$608
Safety equipment- 3 man-days		\$100/man/day	\$300
Misc equipment - 1 days		\$600/day	\$600
Cleaning supplies			\$80
Analysis - 2 samples		\$504/sample	\$1,008
Deepwell (500 G)	Texas Molecular	\$.91/gal	\$455

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Solid Fuel (1 DM)	Systech (as drums)	\$40.55/DM	\$41
TOTAL			\$3,592

2.4 Assessment of Soil

TASK	SOURCE FOR QUOTE	QUOTE	TOTAL COST
Core concrete and sample soil			
labor-80 manhours	Average contractor rates for area	\$38.00/hour	\$3,040
Safety equipment- 10 man-days		\$100/man/day	\$1,000
Misc equipment - 5 days		\$600/day	\$3,000
Analysis (114 samples)		\$549/sample	\$62,586
TOTAL			\$69,626

2.5 Decontaminate concrete

TASK	SOURCE FOR QUOTE	QUOTE	TOTAL COST
Decontaminate concrete			
Supervisor- 48 manhours	Average contractor rates for area	\$62.50/hour	\$3,000
labor-96 manhours	Average contractor rates for area	\$38.00/hour	\$3,648
Safety equipment- 18 man-days		\$100/man/day	\$1,800
Misc equipment - 56 days		\$600/day	\$3,600

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Analysis (11 samples)		\$504/sample	\$5,544
Deepwell (4,600 G)	Texas Molecular	\$.91/gal	\$4,186
Health Risk Assessment		Lump sum	\$25,000
TOTAL			\$46,778

Notes: Water generated assumed to be RCRA hazardous for disposal cost purposes

2.6 Professional Engineer Certification

TASK	SOURCE FOR QUOTE	QUOTE	TOTAL COST
PE Services			
On site - 40 hours		\$150/hour	\$6,000
Report Preparation - 20 hours		\$150/hour	\$3,000
SUBTOTAL			\$9,000
TOTAL			\$9,000

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APPENDIX J-C

CLOSURE PLAN FOR BUILDINGS B, D, AND J

Clean Harbors Kansas, LLC

Appendix J-C Closure Plan for Buildings B, D, and J

Appendix J Closure Plan for Buildings B, D, and J

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Acronym Table

Clean Harbors Kansas, LLC (CHK)
Treatment, Storage, or Disposal Facilities (TSDFs)
Title 40 of the Code of Federal Regulations (40 CFR)
Hazardous Waste Management Units (HWMUs)
National Priorities List (NPL)
Potentially Responsible Party (PRP)
Kansas Department of Health and Environment (KDHE)
Toxic Characteristic Leaching Procedure (TCLP)
Container Management Unit (CMU)
Toxic Characteristic Leaching Procedure (TCLP)

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J-1 Introduction

This plan describes the activities to be performed at Clean Harbors Kansas, LLC at the time of specific unit closure; it addresses closure of the following units:

Container Management Units – Buildings B, D, and J

Tanks – V9, V10, V11, V12, V13, V14, V15A, V15B, V15C, V15D, V16, V17¹, V26²

Miscellaneous units – V26², V34, V35

¹V17 is a permitted hazardous tank that is and always has been used for storage of gasoline as a product.

²V26 is a dispersion tank and is permitted as both a tank and a miscellaneous unit. There is only one tank permitted as both.

Clean Harbors Kansas, LLC has determined that the units referenced above are to be “closed.” This closure term describes a container management unit, tank and/or miscellaneous unit closure with soil sampling under the concrete containment.

J-2 Hazardous Waste Management Units to be Closed

The Clean Harbors Kansas, LLC facility's hazardous waste management units to be closed are summarized in Table J.1, - Clean Harbors Kansas, LLC - Hazardous Waste Management Units, presented in Appendix JC-A, Tables. Specific descriptions of container management units and tank systems are located in Sections D (Container Management) and E (Tank Management) respectively. Miscellaneous units include all remaining units that have not been previously closed. V26 is the former dispersion tank, V34 is the drum washer and V35 is the drum scraper.

All container management units, tanks 9-14, 15a-15d and 16 and miscellaneous units to be closed have been emptied of all waste. Documentation of the cleaning tanks 9-14, 15a-15d and 16 is contained in Appendix C- Invoice for cleaning of tanks 9-14, 15a-15d, and 16

J-3 Closure Performance Standard

Clean Harbors Kansas, LLC will close each hazardous waste management unit and/or the entire facility in a manner that minimizes the need for further maintenance, and controls, minimizes, or eliminates (to the extent necessary to protect human health and the environment) post-closure escape of hazardous waste, hazardous constituents, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere. Closure activities will be performed in a manner that will comply with the closure performance standards as described in 40 CFR 264.111, 264.114 and 264.197.

Clean Harbors Kansas; LLC will meet these performance standards by removing all hazardous waste constituents to acceptable levels (see Section J-4a). All containers, tanks, miscellaneous units, piping, and other ancillary parts to the systems will be closed in one of the following ways:

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1. They will be dismantled and disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility.
2. They will be decontaminated in accordance with the procedures discussed in Section J-4a and disposed at a solid waste landfill.
3. They will be decontaminated sufficiently to be salvaged for future use.
4. They will be transferred for use at another RCRA facility.

All permanent structures (e.g., concrete containment systems) will be decontaminated in accordance with the procedures discussed in Section J-4a and maintained in place.

Prior to use, a representative sample of the tap water utilized in the clean up, will be analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 ug/l 2,4,-D and the rinse water is 0.2 ug/l 2,4,-D, we would subtract 0.1ug/l from the rinse water and get a final value of 0.1ug/l 2,4-D) Use of tap water analytical results as correction factors is subject to prior KDHE approval

Analyte	Analytical Method
27 metal compounds	Various SW846 methods
Volatile organic compounds	EPA 8260
Semivolatiles	EPA 8270
Organochlorine pesticides	EPA 8081/8082
Herbicides	EPA 8151

A detail analyte list is contained in Closure Plan for Buildings B, D, and J Appendix A
Laboratory Analytical Method Detection Limits (MDL)

All analyses performed to verify that closure performance standards are met shall be performed at a laboratory certified by the state of Kansas for the specific analytical procedures used.

J-3a Establishment of Cleanup Standards

At closure, CHK will use Tier 2 risk based standards for residential soil to ground water pathway found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 as the closure performance target level standards for rinse water at the site.

J-4 Closure Activities

Clean Harbors Kansas, LLC will close the units described in J-1 in accordance with the following procedures.

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1. Clean Harbors Kansas, LLC has notified the Kansas Department of Health and Environment (KDHE) or the United States Environmental Protection Agency (USEPA), Region 7, Administrator per this submittal.
2. If modifications to this closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
3. Clean Harbors Kansas, LLC will complete closure activities within 180 days after receiving closure plan approval from KDHE, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
4. Clean Harbors Kansas, LLC will close the facility in accordance with the schedule discussed in Section J-7 and outlined in Table J.3, Closure Activity Schedule - Facility Closure, of this closure plan.
5. The container management units will be closed in accordance with Section J-9a of this closure plan. The tank and miscellaneous systems will be closed in accordance with Section J-9b of this plan.
6. All contaminated equipment and structures will be either properly disposed as hazardous waste or decontaminated in accordance with Section J-4a of this closure plan. After decontamination, equipment (such as conveyers) and structures may be salvaged for future use.
7. All wastes generated from closure activities will be handled in accordance with Section J-4b of this closure plan.
8. The Clean Harbors Kansas, LLC facility does not contain disposal units. All tank systems have secondary containment meeting the requirements of 40 CFR 264.193 (b) through (f). Also, all hazardous wastes and hazardous waste constituents will be removed from the facility during final closure and all structures will be decontaminated in accordance with this closure plan. If clean closure is not achieved, facility will submit a post-closure plan to the regulatory authority.
9. Clean Harbors will inform KDHE and EPA two weeks before closure activities are initiated. Confirmation samples (soil, final rinse water) must be collected in the presence of KDHE/EPA personnel and a Kansas Professional Engineer.
10. Within 60 days of closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, a certification of closure and a closure report, to KDHE and the Regional Administrator of the USEPA, Region 7. The certification will be signed by CHK, as the owner/operator of the facility and by an independent Kansas registered professional engineer attesting that the units were closed in accordance with

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this closure plan.

11. Closure activities will be conducted in accordance with KDHE approved closure-specific work plans, sampling and analysis plans and quality assurance project plans.

J-4a Disposal or Decontamination of Equipment and Structures

During closure, all contaminated equipment and structures will be either properly disposed or decontaminated. Activities will be performed in a manner that will comply with the closure performance standards as described in 40 CFR 264.111, 264.114 and 264.197.

J-4a(1) Soil

During closure operations, the soil beneath containment systems of all hazardous waste management units will be investigated as follows.

1. Each management unit containment area will be mapped with a grid system. A 25' x 25' grid will be used in material storage areas and a 15' x 15' grid will be used in material processing areas. A soil sample will be taken in the center of each grid. If necessary, concrete borings will be done to sample each required location. Additionally, if a crack exists, a sample will be collected under the crack every 10'. (Note: This does not apply to surface cracks) A sample will also be collected under every sump.
2. Collect samples at soil interface beneath the concrete surface and below the underlying subgrade rock where rock exists, and analyze using SW-846 standard methods for the parameters identified in Appendix A. Borings for soil samples in non active containment areas will remain open until any additional sampling required by the EPA or KDHE for closure or corrective action purposes at that location has been completed.
3. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
4. For closure Soil will be considered clean for closure when results of sample analyses are at or below the Tier 2 risk based standards for non-residential soil pathway or the Residential Soil to Ground Water pathway, whichever is lower, found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)" 2010
5. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted

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to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42.

Alternatively, this may be addressed in the site's corrective action program if formally deferred to the corrective action process by the regulatory agencies.

6. KDHE can ask for additional soil samples at any location and depths within the regulatory unit, if staining of soil or other indications of contamination are present.

J-4a(2) Hazardous Waste Management Units (HWMUs)

Decontamination procedures for hazardous waste management units (i.e., tank systems, miscellaneous units and container storage units) are discussed in the following paragraphs. Specific procedures are outlined based on configuration of the equipment. "Exposed surfaces" are external surfaces and those internal surfaces that are readily scraped, sandblasted, brushed, or swept (i.e., accessible to standard techniques for removal of residual materials).

J-4a(2)(a) HWMUs with no internal or complicated external parts

All tank systems, miscellaneous units, container management units, and their associated secondary containment system components and ancillary equipment will be decontaminated as follows (unless the unit has internal and/or complicated external parts exposed to waste).

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated liquids from the two first washes will be collected and handled in accordance with Section J-4b of this closure plan. The third wash/rinse will be performed with clean (potable) water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visible residue. If necessary, the facility will repeat all, or part, of the above procedures.
3. A representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix A – Laboratory Analytical Method Detection Limits (MDL)

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4. Prior to use, a representative sample of the tap water utilized in the clean up, will be analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 ug/l 2,4,-D and the rinse water is 0.2 ug/l 2,4,-D, we would subtract 0.1ug/l from the rinse water and get a final value of 0.1ug/l 2,4-D) Use of tap water analytical results as correction factors is subject to prior KDHE approval
5. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non- residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If the unit is not decontaminated after performing Steps 1 through 5, the facility will either repeat the above procedures or dismantle the unit for further management and/or disposal at an off-site permitted TSDF as a hazardous waste. Equipment disposed in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

J-4a(2)(b) HWMUs with internal or complicated external parts

Any miscellaneous unit or tank system with external or complicated internal parts exposed to wastes will be decontaminated as follows.

1. Exposed surfaces(i.e. building walls, floors) will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary the facility will repeat all, or part, of the above procedures.
3. If visible contamination remains, go to Step 6 below. If no visible contamination remains, a representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix J-A.

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4. Prior to use, a representative sample of the tap water utilized in the cleanup will be analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from the compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 µg/l 2,4,-D and the rinse water is 0.2 µg/l 2,4,-D, we would subtract 0.1 µg/l from the rinse water and get a final value of 0.1 µg/l 2,4,-D). Use of tap water analytical results as correction factors is subject to prior KDHE approval.
5. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non-residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If, after performing the above rinsing procedures, the equipment can not be decontaminated, the equipment will be transported by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal. Equipment disposed in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

J-4a(3) Closure of Miscellaneous Handling Equipment

A wide variety of equipment on site may be used for hazardous waste management. Equipment that has been in contact with hazardous waste will be decontaminated during closure activities. Equipment which may require decontamination during closure includes (but is not limited to) industrial trucks, drum dollies, handcarts, conveyers, augers, and other material transfer equipment, as well as hand tools such as shovels, brushes, scrapers, etc. During facility closure, this equipment may remain on-site in continued service or will be closed in one of the following ways:

- For closure of small equipment (such as hand tools), if visible contamination exists, the equipment will be disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility,
- For closure of all equipment (including hand tools), if visible contamination exists, equipment will be decontaminated and disposed at a solid waste landfill. If evidence of contamination exists after decontamination, the equipment will be transported by a permitted/licensed hauler to a permitted RCRA/HSWA off-site TSDF for further treatment or disposal, or
- For closure of all equipment (including hand tools), if visible contamination exists, equipment will be decontaminated sufficiently to be salvaged for future use and potentially transferred for use at another RCRA facility. All decontamination activity will be performed over a portable, disposable decontamination pad (Example: kid swimming pool)

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J-4a(3)(a) Decontamination of small miscellaneous handling equipment

All hand tools and equipment without internal or complicated external parts will be decontaminated in accordance with the following procedures.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be rinsed with a high-pressure stream of steam or water, possibly with suitable detergents or other cleaning additives, until either all visible contamination is removed, or until further removal is not feasible. All accumulated solids and liquids will be handled in accordance with section J-4b of this closure plan.
2. The equipment will be visually inspected for evidence of visible contamination.
3. The equipment will be considered decontaminated when no visible evidence of contamination exists.
4. If visible evidence of contamination remains and cannot be removed, the equipment will be disposed as a hazardous waste.

J-4a(3)(b) Decontamination of large miscellaneous handling equipment with no internal or complicated external parts

All large equipment with no internal or complicated external parts will be decontaminated as follows.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary, the facility will repeat all, or part, of the above procedures.
3. A representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix A – Laboratory Analytical Method Detection Limit (MDL)
4. Prior to use, a representative sample of the tap water utilized in the clean up, will be

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analyzed as a blank for the same parameters as the closure samples. If KDHE approves the use of this water, corresponding detectable chemicals of concern from compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 ug/l 2,4,-D and the rinse water is 0.2 ug/l 2,4,-D, we would subtract 0.1ug/l from the rinse water and get a final value of 0.1ug/l 2,4-D) Use of tap water analytical results as correction factors is subject to prior KDHE approval

5. Except in cases where the Hazardous Waste Debris Rule applies, the equipment will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non-residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If the unit is not decontaminated after performing Steps 1 through 5, the facility will either repeat the above procedures or dismantle the unit and transport it by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal.

J-4a(3)(c) Decontamination of large miscellaneous handling equipment with internal or complicated external parts

All large equipment with internal and/or complicated external parts that contact waste will be decontaminated in accordance with the following procedures.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J-4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary the facility will repeat all, or part, of the above procedures.
3. If visible contamination remains, go to Step 6 below. If no visible contamination remains, the facility will take a representative sample of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents identified in J-3 are broken down further by compound in Appendix A – Laboratory Analytical Method Detection Limit (MDL)
4. Prior to use, a representative sample of the tap water utilized in the cleanup will be analyzed as a blank for the same parameters as the closure samples. If KDHE

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approves the use of this water, corresponding detectable chemicals of concern from the compound table in Appendix J-A may be deducted from the analytical results from each final rinse sample as correction factors (e.g. if tap water sample has 0.1 µg/l 2,4,-D and the rinse water is 0.2 µg/l 2,4,-D, we would subtract 0.1 µg/l from the rinse water and get a final value of 0.1 µg/l 2,4,-D). Use of tap water analytical results as correction factors is subject to prior KDHE approval.

5. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the Tier 2 risk based standards for non-residential ground water found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)", 2010 or the analytical detection level if there is not a corresponding RSK standard.
6. If after performing the above rinsing procedures, the equipment can not be decontaminated, the equipment will be transported by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal. Equipment disposed in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

J-4a(4) Disposal of Cleanup Equipment/Clothing and Residue

- a. All contaminated equipment used during the cleanup that can't be decontaminated, such as shovels, dustpans and brooms, are shipped to approved KDHE/EPA-disposal facilities in DOT-approved containers or decontaminated using the triple wash/rinse method.
- b. All contaminated clothing, plastic sheets, rags, etc., generated during cleanup that can't be decontaminated, are sent to KDHE/EPA-approved disposal facilities in DOT approved containers.
- c. All hazardous waste residues from the cleanup of areas and equipment will be sent to KDHE/EPA-approved disposal facilities in DOT approved containers.

J-4b Hazardous Waste Handling Procedures

All contaminated solids, liquids, sludges, soils, and debris generated by the closure process will be managed in accordance with applicable regulations as site generated solid waste (i.e., Clean Harbors Kansas, LLC is the generator). Generated wastes meeting the definition of "hazardous waste" under 40 CFR 261.3 will be handled in the manner discussed below.

Site-generated hazardous wastes may be stored on-site in containers, existing tanks, or temporary portable tanks prior to treatment or removal from the facility. The wastes may be consolidated on-site in accordance with the facility's RCRA/HSWA permit. A temporary storage area may be developed for storage of these generated wastes, and if so, wastes will be stored in this area for less than ninety days. These wastes will then be transported to a permitted off-site Treatment, Storage, or Disposal Facility (TSDF) by a permitted hazardous waste hauler for

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appropriate disposal or further treatment (e.g. landfill, deep-well injection, incineration, cement kiln, recycling facility).

J-5 Maximum Extent of Operations

Table J.1 lists all hazardous waste management units to be closed under this closure plan existing at the Clean Harbors Kansas, LLC facility. This table represents the maximum extent of operations that are currently planned to be closed at this facility.

J-6 Maximum Waste Inventory

The units to be closed have been emptied of all waste.

J-7 Schedule for Final Closure

Table J.3, Closure Activity Schedule – Facility Closure outlines the anticipated schedule for closing the Clean Harbors Kansas, LLC facility.

During closure, hazardous waste management units may be closed simultaneously or sequentially. Also, a temporary storage area may be developed for storage of wastes which are generated on-site during closure activities, and if so, wastes will be stored in this area for less than ninety days in appropriate containers or temporary tanks.

J-7a Expected Year of Closure

Clean Harbors Kansas, LLC intends to conduct this closure within 180 days after approval of this plan by KDHE.

J-8 Closure Plan Amendment

Clean Harbors Kansas, LLC maintains a copy of the closure plan at the facility. Clean Harbors Kansas, LLC will submit a written request for approval to change the closure plan, in accordance with 40 CFR 264.112(c) and 40 CFR 270.42, whenever one of the following occurs.

1. Changes in operating plans or facility design affect the closure plan.
2. Change in the estimated year of final closure (see section J-7a).
3. In conducting closure activities, unexpected events occur which affect the closure plan.

This notification will include a copy of the amended closure plan for review or approval by KDHE. It will be submitted at least 60 days prior to the proposed change in facility design or operation or no later than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the closure period, Clean Harbors Kansas, LLC will submit the notification or request no later than 30 days after the unexpected event's occurrence.

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J-9 Individual Unit Closures

This section details the closure procedures of each individual hazardous waste management unit. During facility closure each hazardous waste management unit will be closed in accordance with this section.

J-9a Building B, D, and J Closure

At closure of buildings B, D, and J, all hazardous waste and hazardous waste residues will be removed from the buildings. Remaining containers, liners and bases containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

J-9a(1) Process and Unit Description

The building B, D, and J at the Clean Harbors Kansas, LLC facility are used for storing and staging containers of hazardous and non-hazardous wastes. The wastes managed in these areas include liquids, sludges, and solids and are managed in containers of varying sizes. The CHK facility manages containerized waste in container management areas, each roofed and constructed with concrete diking to minimize run-on and run-off. Figure J.3, depicts the location of each Hazardous waste management units at the facility.

J-9a(2) Unit Closure Procedures

For the purposes of this closure plan, each building includes the following structures/equipment:

- Containers, drums, pallets, marino bags, etc., and associated hazardous wastes, waste residues and constituents.
- All associated secondary containment structures (concrete pads, curbs, ramps, etc.).
- Associated equipment (e.g., conveyors, etc.).

During closure operations, the soil beneath containment systems of all hazardous waste management units including buildings will be investigated as follows.

1. Each management unit containment area will be mapped with a grid system. A 25' x 25' grid will be used in material storage areas and a 15' x 15' grid will be used in material processing areas. A soil sample will be taken in the center of each grid. If necessary, concrete borings will be done to sample each required location. Additionally, if a crack exists, a sample will be collected under the crack every 10'. (Note: This does not apply to surface cracks) A sample will also be collected under every sump.
2. Collect samples at soil interface beneath the concrete surface and below the

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underlying subgrade rock where rock exists. Borings for soil samples in non active containment areas will remain open until any additional sampling required by the EPA or KDHE for closure or corrective action purposes at that location has been completed. These samples will be analyzed using SW-846 standard methods, and will be analyzed for total concentrations of all constituents identified in J-3. The constituents in J-3 are broken down further by compound in Appendix J-A– Laboratory Analytical Method Detection Limit (MDL).

3. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
4. Soil will be considered clean for closure when results of sample analyses are at or below the Tier 2 risk based standards for non-residential soil pathway or the Residential Soil to Ground Water pathway, whichever is lower, found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)" 2010
- 0.
5. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42. Alternatively, this may be addressed in the site's corrective action program if formally deferred to the corrective action process by the regulatory agencies.
6. KDHE can ask for additional soil samples at any location and depths within the regulatory unit, if staining of soil or other indications of contamination are present.

Clean Harbors Kansas, LLC will close building B, D, and J as follows.

- A. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
- B. Clean Harbors Kansas, LLC will close the buildings in accordance with the schedule outlined in Table J.3, Closure Activity Schedule and as discussed in Section J-9a(3) of this closure plan.
- C. All contaminated equipment, structures, and secondary containment systems will be:
 1. Dismantled and disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or

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Appendix J-C Closure Plan for Buildings B, D, and J

2. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or
 3. Decontaminated in accordance with Section J-4a and either salvaged for future use or left in place.
 4. Successfully decontaminated equipment may be transferred to another TSDF for use.
- D. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.
- E. Clean Harbors Kansas, LLC will complete closure activities within 180 days after this plan has been approved by KDHE, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
- F. The buildings B, D, and J are not disposal units. Also, all hazardous wastes and hazardous waste constituents will be removed from the buildings during closure and all structures will be decontaminated in accordance with this closure plan. If Clean Closure is not achieved, the facility will submit a post-closure plan to the regulatory authority.

J-9a(3) Unit Closure Schedule

Table J.3 outlines the anticipated schedule for closure of building B, D, and J at the Clean Harbors Kansas, LLC facility.

J-9b Tank System or Miscellaneous Unit Closure

At closure of a tank or tank system or miscellaneous unit, all hazardous waste and hazardous waste residues will be removed from the unit. Tanks, ancillary equipment and miscellaneous units containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

J-9b(1) Process and Unit Description

The tanks miscellaneous units used at Clean Harbors Kansas, LLC vary in size. All hazardous waste management units operating under this permit have secondary containment designed, installed, and operated to prevent migration of wastes or accumulated liquid to the environment.

These containment systems, consisting of concrete slabs surrounded by concrete walls or dikes of varying height, enable the detection of and collection of releases and accumulated liquids. The concrete containment liner is also maintained free from cracks and gaps.

These units are summarized in Table J.1. In addition, Figure J.3, shows the location of each

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tank or miscellaneous unit to be closed at the facility

J-9b(2) Unit Closure Procedures

For the purposes of this closure plan, each tank system or miscellaneous unit includes:

- Tanks and associated hazardous wastes, waste residues and constituents;
- All ancillary equipment including, but not limited to, piping, fittings, flanges, valves, and pumps; and
- All associated secondary containment structures (concrete pads, curbs, ramps, etc.).
Note: V26, V34 and V35 are in a containment area that will remain in use to provide containment for existing tanks. This containment area is not subject to decontamination per this closure plan.

V17 is permitted as a hazardous waste tank. It is used for gasoline product and has never been used for waste. This tank was inappropriately permitted as a hazardous waste tank. It will be emptied of product and triple washed. After the triple wash process, the tank will be considered decontaminated and will be put back in service to store product.

During closure operations, the soil beneath containment systems of all hazardous waste management units will be investigated as follows.

1. Each management unit containment area will be mapped with a grid system. A 25' x 25' grid will be used in material storage areas and a 15' x 15' grid will be used in material processing areas. A soil sample will be taken in the center of each grid. If necessary, concrete borings will be done to sample each required location. Additionally, if a crack exists, a sample will be collected under the crack every 10'. (Note: This does not apply to surface cracks) A sample will also be collected under every sump.
2. Collect samples at soil interface beneath the concrete surface and below the underlying subgrade rock where rock exists. and analyze using SW-846 standard methods for the parameters identified in Appendix A. Borings for soil samples in non active containment areas will remain open until any additional sampling required by the EPA or KDHE for closure or corrective action purposes at that location has been completed.
3. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
4. For closure, Soil will be considered clean for closure when results of sample

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analyses are at or below the Tier 2 risk based standards for non-residential soil pathway or the Residential Soil to Ground Water pathway, whichever is lower, found in KDHE's guidance document, "Risk Based Standards for Kansas (RSK)" 2010

5. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42. Alternatively, this may be addressed in the site's corrective action program if formally deferred to the corrective action process by the regulatory agencies..
6. KDHE can ask for additional soil samples at any location and depths within the regulatory unit, if staining of soil or other indications of contamination are present.

Clean Harbors Kansas, LLC will close building B, D, and J and any tank system or miscellaneous unit contained in those buildings as follows.

- A. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
- B. Clean Harbors Kansas, LLC will close the buildings in accordance with the schedule outlined in Table J.3, Closure Activity Schedule and as discussed in Section J-9a(3) of this closure plan.
- C. All contaminated equipment, structures, and secondary containment systems will be:
 1. Dismantled and disposed as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or
 2. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or
 3. Decontaminated in accordance with Section J-4a and either salvaged for future use or left in place.
 4. Successfully decontaminated equipment may be transferred to another TSDF for use.

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- D. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.
- E. Clean Harbors Kansas, LLC will complete closure activities within 180 days after this plan has been approved by KDHE, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
- F. The buildings B, D, and J are not disposal units. Also, all hazardous wastes and hazardous waste constituents will be removed from the buildings during closure and all structures will be decontaminated in accordance with this closure plan. Therefore, the buildings B, D, and J are not subject to the post-closure care requirements of 40 CFR 264.116 through 264.120.

The following sequence of work events will be implemented at each tank location:

- Visually inspect the tank location in relation to overhead utilities, adjacent utilities, building load bearing supports, present of contamination and electrical components and make the necessary plans to remove or work around in a safe manner.
- Position the scissors lift below and adjacent to the tank and place personnel and equipment into the scissors lift platform
- Secure/Harness all personnel and equipment a required.
- Lift the necessary manpower and equipment to the top of the tank.
- Remove any non-structural or non building supporting structures which may be impeding the tank removal.
- Open the tank via the man way.
- Monitor the inside gas vapors and implement the necessary purging procedures previous to arc weld cutting.
- Make initial cut into a $\frac{1}{4}$ section of the tank and secure a hook via the boom
- Continue to cut the $\frac{1}{4}$ section of the tank until it has separated from the remaining $\frac{3}{4}$ section of the tank.
- Lower the entire $\frac{1}{4}$ section of the tank to the ground surface

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- Continue to cut the $\frac{1}{4}$ section of the tank into manageable piece on the ground surface utilizing the boom as necessary to prevent free falling pieces.
- Continue the above process for the remaining $\frac{3}{4}$ section of tank removing $\frac{1}{4}$ section sections a time and lowering to the ground surface.
- When sufficient pieces have accumulated on the ground surface, load the tank pieces onto the flat bed truck with the skid steer/fork lift.
- Dispatch the truck to the local metal recycling facility.
- Maintain accurate records of truck net weights of metal.
- Continue the above process for all inside tanks

J-9b(3) Unit Closure Schedule

Table J.3 outlines the anticipated schedule for the closure of a tank/tank system at the Clean Harbors Kansas, LLC facility.

J-10 Certification of Closure

Within 60 days of final closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, a certification of closure to KDHE and to the Regional Administrator of the USEPA, Region 7 per 40 CFR 264.115. The certification will be signed by CHK, as the owner/operator of the facility and by an independent Kansas registered professional engineer attesting that the units were closed in accordance with this closure plan.

J-11 Closure Report

Within 60 days of final closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, the Closure report to KDHE and to the Regional Administrator of the USEPA, Region 7. The final closure report will include the following as applicable to each area being closed:

- Site history information;
- A map of the site indicating the location of the units being closed;
- Visual observation made at the time of closure with respect to condition of the units;
- Documentation of the methods used to clean/decontaminate the units;
- Photographs associated with the closure of the units (before, during, and after closure) used in conjunction with written documentation;

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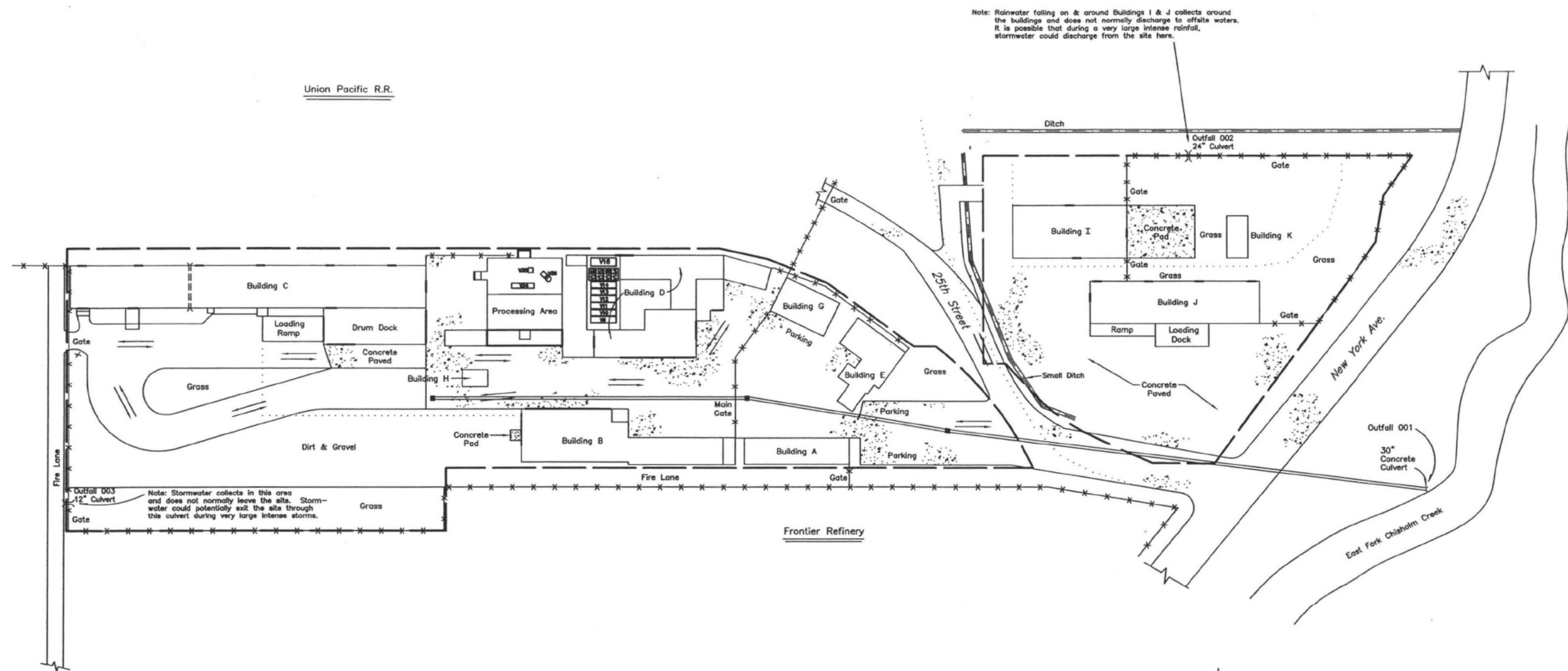
Appendix J-C Closure Plan for Buildings B, D, and J

- The volume of waste and waste residue removed, including the waste (residue) resulting from decontamination activities;
- A description of the method of waste handling and transport;
- Waste manifest numbers or copies of manifests from the removal of waste and waste residues;
- A description of the sampling and analytical methods used, including sample preservation and chain of custody methods;
- Laboratory records;
- A narrative description of the closure field tasks performed;
- A chronological field log of closure activities;
- Tests performed and methods;
- Location of the sampling points;
- Results of laboratory analyses, summarized in a tabular format and with the laboratory reports as an appendix;
- Documentation of off-site disposal for any materials taken off-site; and,
- A brief description of the current regulatory status and operations at the site
- A comparison of the results of laboratory analyses with the performance standards for clean closure

J-12 Requirements for Kansas Engineer

An independent Kansas registered professional engineer must be present at all sampling events and must also certify the closure report and the closure certification. The engineer must have relative experience with closure operations. The Engineering will have experience similar to the example resume in Appendix B.

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Building Legend

Building A	Laboratory/Administration
Building C	Hazardous Waste Management Building
Building E	Administration
Building G	Personnel Decon/Break Room
Building H	Operations Office
Building I	Hazardous Waste Management Building
Processing Area	Hazardous Waste Management Area
Drum Dock	Hazardous Waste Management Area

Legend:

+++++	Railroad Tracks
-x-x-	Fence
- - -	Property Line
=====	Loading and Unloading Area
=====	Secondary Containment Berm or Wall
[Pattern]	Pavement
.....	Drainage Boundary
■	Storm Drain Catch Basins
=====	Underground Storm Sewer Line
==>==	Truck Routes

Notes:

- TANKS & MISCELLANEOUS UNIT LOCATIONS SUBJECT TO CLOSURE ARE IDENTIFIED IN THE PROCESSING AREA AND BUILDING D.
- CONTAINER MANAGEMENT UNITS SUBJECT TO CLOSURE INCLUDE:
BUILDING B
BUILDING D
BUILDING J

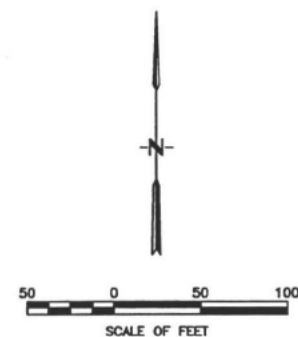



FIGURE J-3

						 <small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS KANSAS, LLC. ANY REPRODUCTION OR DISTRIBUTION WITHOUT WRITTEN PERMISSION IS PROHIBITED.</small>	TITLE CLEAN HARBORS KANSAS, LLC WICHITA FACILITY HAZARDOUS WASTE MANAGEMENT AREAS			
		C	RCRA PART B SUBMITTAL UPDATE	K.M.C.	6/25/12		S.A.B.	DRAWING NO. HWMA	REV.	
		B	RCRA PART B SUBMITTAL UPDATE	K.M.C.	9/3/10		S.A.B.			
		A	RCRA PART B SUBMITTAL	K.M.C.	3/27/09		M.C.			
REFERENCE DRAWINGS		REV.	DESCRIPTION	DRAWN	CHECKED	SCALE	DATE			
				DATE	BY	AS NOTED	03/24/09			

APPENDIX JC-A

TABLES

Appendix J-B
Example Engineer Resume

TABLE J-C.1

EXTENT OF OPERATIONS

CLEAN HARBORS KANSAS, LLC - HAZARDOUS WASTE MANAGEMENT UNITS

<u>HWMU</u>	<u>UNIT</u>	<u>Wastes Stored/Function</u>
C	Building B	Hazardous waste - Container Management
C	Building D	Hazardous waste - Container Management
C	Building J	Hazardous waste - Container Management
T	V-9	Hazardous Waste Liquid
T	V-10	Hazardous Waste Liquid
T	V-11	Hazardous Waste Liquid
T	V-12	Hazardous Waste Liquid
T	V-13	Hazardous Waste Liquid
T	V-14	Hazardous Waste Liquid
T	V-15A	Hazardous Waste Liquid
T	V-15B	Hazardous Waste Liquid
T	V-15C	Hazardous Waste Liquid
T	V-15D	Hazardous Waste Liquid
T	V-16	Hazardous Waste Liquid
T	V-17	Hazardous Waste Liquid
T	V-26	Hazardous Waste Liquid
M	V-26	Hazardous Waste Liquid
M	V-34	Hazardous Waste Liquid
M	V-35	Hazardous Waste Liquid

Note: V26 is permitted as a tank and a miscellaneous unit. There is only 1 unit permitted both as a tank and miscellaneous unit.

TABLE J-C.3

CLOSURE ACTIVITY SCHEDULE - FACILITY CLOSURE

<u>Calendar Days Lapsed</u>	<u>Closure Activity</u>
0	Closure Plan approved by KDHE
120	Complete decontamination of tanks, miscellaneous and container management units. Collect and Analyze rinsate and water samples.
150	Complete dismantling/removal of all generated wastes, temporary storage units, and decontaminated tanks, equipment, and structures (if removal is necessary). Collect and Analyze rinsate and soil samples.
180	Complete final closure activities.
200	Inspection of facility by a Professional Engineer.
240	Submit a certification of closure to KDHE or the EPA Region 7 Administrator.

**Clean Harbors Kansas, LLC
Section J
Closure Plan
Appendix J-A - Tables**

APPENDIX J-A

TABLES

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Compound List Report
Product: AB8270STD Semivolatiles
Matrix: AQ Aqueous

Method List: AB8270 AQ
Report List: AB8270 ALL
RL/MDL Factor: 1

Method Ref: SW846 8270D
ABN Full List

Compound	CAS No.	RL	MDL	Units	Control Limits (%)		Rev: 10/23/10	
					MS/MSD	RPD	BS	DUP
Benzoic Acid	65-85-0	50	10 ug/l		10-150		40 10-150	40
2-Chlorophenol	95-57-8	5	0.5 ug/l		44-103		29 44-103	29
4-Chloro-3-methyl phenol	59-50-7	5	0.5 ug/l		53-105		24 53-105	24
2,4-Dichlorophenol	120-83-2	5	0.5 ug/l		53-108		26 53-108	26
2,4-Dimethylphenol	105-67-9	5	1.1 ug/l		37-91		28 37-91	28
2,4-Dinitrophenol	51-28-5	25	10 ug/l		37-111		30 37-111	30
4,6-Dinitro-o-cresol	534-52-1	10	2 ug/l		62-115		26 62-115	26
2-Methylphenol	95-48-7	5	0.54 ug/l		35-91		30 35-91	30
3&4-Methylphenol		5	1.1 ug/l		32-85		29 32-85	29
2-Nitrophenol	88-75-5	5	0.54 ug/l		49-111		30 49-111	30
4-Nitrophenol	100-02-7	25	5 ug/l		13-55		31 13-55	31
Pentachlorophenol	87-86-5	25	5.4 ug/l		57-118		26 57-118	26
Phenol	108-95-2	5	0.5 ug/l		13-54		34 13-54	34
2,4,5-Trichlorophenol	95-95-4	5	0.5 ug/l		59-106		23 59-106	23
2,4,6-Trichlorophenol	88-06-2	5	0.5 ug/l		58-107		24 58-107	24
Acenaphthene	83-32-9	5	0.5 ug/l		58-106		21 58-106	21
Acenaphthylene	208-96-8	5	0.5 ug/l		58-105		21 58-105	21
Aniline	62-53-3	5	0.52 ug/l		43-98		28 43-98	28
Anthracene	120-12-7	5	0.5 ug/l		65-108		19 65-108	19
Benzidine	92-87-5	25	4.7 ug/l		15-73		23 15-73	23
Benzo(a)anthracene	56-55-3	5	0.5 ug/l		63-111		19 63-111	19
Benzo(a)pyrene	50-32-8	5	0.5 ug/l		62-106		20 62-106	20
Benzo(b)fluoranthene	205-99-2	5	0.5 ug/l		63-109		20 63-109	20
Benzo(g,h,i)perylene	191-24-2	5	0.5 ug/l		61-111		21 61-111	21
Benzo(k)fluoranthene	207-08-9	5	0.5 ug/l		64-111		20 64-111	20
4-Bromophenyl phenyl ether	101-55-3	5	0.5 ug/l		64-107		20 64-107	20
Butyl benzyl phthalate	85-68-7	5	1.1 ug/l		59-114		20 59-114	20
Benzyl Alcohol	100-51-6	5	1 ug/l		34-98		27 34-98	27
2-Chloronaphthalene	91-58-7	5	0.5 ug/l		54-105		24 54-105	24
4-Chloroaniline	106-47-8	5	0.5 ug/l		53-103		22 53-103	22
Carbazole	86-74-8	5	0.5 ug/l		66-109		20 66-109	20
Chrysene	218-01-9	5	0.5 ug/l		64-111		19 64-111	19
bis(2-Chloroethoxy)methane	111-91-1	5	0.5 ug/l		48-101		28 48-101	28
bis(2-Chloroethyl)ether	111-44-4	5	0.54 ug/l		51-108		27 51-108	27
bis(2-Chloroisopropyl)ether	108-60-1	5	0.54 ug/l		43-106		27 43-106	27
4-Chlorophenyl phenyl ether	7005-72-3	5	0.5 ug/l		61-107		20 61-107	20
1,2-Dichlorobenzene	95-50-1	5	1 ug/l		41-102		28 41-102	28
1,2-Diphenylhydrazine	122-66-7	5	0.5 ug/l		61-110		20 61-110	20
1,3-Dichlorobenzene	541-73-1	5	1 ug/l		38-100		28 38-100	28
1,4-Dichlorobenzene	106-46-7	5	1 ug/l		40-100		28 40-100	28
2,4-Dinitrotoluene	121-14-2	5	0.5 ug/l		60-109		20 60-109	20

2,6-Dinitrotoluene	606-20-2	5	0.5 ug/l	58-104	21 58-104	21
3,3'-Dichlorobenzidine	91-94-1	10	1 ug/l	57-105	25 57-105	25
Dibenzo(a,h)anthracene	53-70-3	5	0.52 ug/l	62-112	20 62-112	20
Dibenzofuran	132-64-9	5	0.5 ug/l	61-108	20 61-108	20
Di-n-butyl phthalate	84-74-2	5	0.87 ug/l	62-109	20 62-109	20
Di-n-octyl phthalate	117-84-0	5	1.1 ug/l	60-120	24 60-120	24
Diethyl phthalate	84-66-2	5	1.1 ug/l	62-109	19 62-109	19
Dimethyl phthalate	131-11-3	5	0.99 ug/l	63-106	19 63-106	19
bis(2-Ethylhexyl)phthalate	117-81-7	5	1.1 ug/l	59-116	21 59-116	21
Fluoranthene	206-44-0	5	0.5 ug/l	65-114	21 65-114	21
Fluorene	86-73-7	5	0.5 ug/l	61-106	19 61-106	19
Hexachlorobenzene	118-74-1	5	0.56 ug/l	62-107	20 62-107	20
Hexachlorobutadiene	87-68-3	5	1 ug/l	38-107	30 38-107	30
Hexachlorocyclopentadiene	77-47-4	10	1.9 ug/l	19-84	35 19-84	35
Hexachloroethane	67-72-1	5	1 ug/l	35-101	29 35-101	29
Indeno(1,2,3-cd)pyrene	193-39-5	5	0.5 ug/l	61-113	20 61-113	20
Isophorone	78-59-1	5	0.5 ug/l	56-111	26 56-111	26
1-Methylnaphthalene	90-12-0	5	0.5 ug/l	52-102	25 52-102	25
2-Methylnaphthalene	91-57-6	5	0.57 ug/l	56-112	26 56-112	26
2-Nitroaniline	88-74-4	5	0.5 ug/l	60-109	20 60-109	20
3-Nitroaniline	99-09-2	5	0.5 ug/l	52-107	21 52-107	21
4-Nitroaniline	100-01-6	5	0.5 ug/l	59-111	21 59-111	21
Naphthalene	91-20-3	5	0.8 ug/l	50-104	28 50-104	28
Nitrobenzene	98-95-3	5	0.59 ug/l	52-105	28 52-105	28
N-Nitrosodimethylamine	62-75-9	5	2.4 ug/l	20-71	32 20-71	32
N-Nitroso-di-n-propylamine	621-64-7	5	0.5 ug/l	51-104	28 51-104	28
N-Nitrosodiphenylamine	86-30-6	5	1 ug/l	57-110	19 57-110	19
Phenanthrene	85-01-8	5	0.5 ug/l	65-108	20 65-108	20
Pyrene	129-00-0	5	0.5 ug/l	60-113	20 60-113	20
Pyridine	110-86-1	10	1.6 ug/l	15-67	40 15-67	40
1,2,4-Trichlorobenzene	120-82-1	5	0.5 ug/l	45-104	28 45-104	28
2-Fluorophenol	367-12-4			Surrogate Limits:	14-62	
Phenol-d5	4165-62-2			Surrogate Limits:	Oct-40	
2,4,6-Tribromophenol	118-79-6			Surrogate Limits:	33-118	
Nitrobenzene-d5	4165-60-0			Surrogate Limits:	42-108	
2-Fluorobiphenyl	321-60-8			Surrogate Limits:	40-106	
Terphenyl-d14	1718-51-0			Surrogate Limits:	39-121	

72 compounds and 6 surrogates reported in list AB8270

AB8270STD solid

Compound	CAS No.	RL	MDL	Units	MS/MSD	RPD	BS	DUP
Benzoic Acid	65-85-0	830	290	ug/kg	44-116		36 44-116	36
2-Chlorophenol	95-57-8	170	17	ug/kg	54-97		31 54-97	31
4-Chloro-3-methyl phenol	59-50-7	170	17	ug/kg	59-102		27 59-102	27
2,4-Dichlorophenol	120-83-2	170	17	ug/kg	60-101		30 60-101	30
2,4-Dimethylphenol	105-67-9	170	21	ug/kg	49-89		31 49-89	31
2,4-Dinitrophenol	51-28-5	830	330	ug/kg	39-107		40 39-107	40
4,6-Dinitro-o-cresol	534-52-1	330	67	ug/kg	58-109		37 58-109	37
2-Methylphenol	95-48-7	170	17	ug/kg	53-94		29 53-94	29
3&4-Methylphenol		170	24	ug/kg	54-95		31 54-95	31
2-Nitrophenol	88-75-5	170	17	ug/kg	55-96		30 55-96	30
4-Nitrophenol	100-02-7	830	130	ug/kg	56-106		29 56-106	29
Pentachlorophenol	87-86-5	830	200	ug/kg	50-115		33 50-115	33
Phenol	108-95-2	170	17	ug/kg	55-99		28 55-99	28
2,4,5-Trichlorophenol	95-95-4	170	17	ug/kg	60-101		28 60-101	28
2,4,6-Trichlorophenol	88-06-2	170	17	ug/kg	60-100		27 60-100	27
Acenaphthene	83-32-9	170	17	ug/kg	59-97		29 59-97	29
Acenaphthylene	208-96-8	170	17	ug/kg	58-98		30 58-98	30
Aniline	62-53-3	170	33	ug/kg	38-92		38 38-92	38
Anthracene	120-12-7	170	17	ug/kg	61-104		29 61-104	29
Benzidine	92-87-5	1700	330	ug/kg	10-151		50 10-156	
Benzo(a)anthracene	56-55-3	170	17	ug/kg	60-106		31 60-106	31
Benzo(a)pyrene	50-32-8	170	17	ug/kg	59-102		32 59-102	32
Benzo(b)fluoranthene	205-99-2	170	17	ug/kg	60-107		31 60-107	31
Benzo(g,h,i)perylene	191-24-2	170	17	ug/kg	56-103		32 56-103	32
Benzo(k)fluoranthene	207-08-9	170	17	ug/kg	61-107		30 61-107	30
4-Bromophenyl phenyl ether	101-55-3	170	17	ug/kg	60-104		26 60-104	26
Butyl benzyl phthalate	85-68-7	170	33	ug/kg	57-110		28 57-110	28
Benzyl Alcohol	100-51-6	170	33	ug/kg	51-102		34 51-102	34
2-Chloronaphthalene	91-58-7	170	33	ug/kg	57-95		28 57-95	28
4-Chloroaniline	106-47-8	170	17	ug/kg	19-85		34 19-85	34
Carbazole	86-74-8	170	17	ug/kg	60-106		30 60-106	30
Chrysene	218-01-9	170	17	ug/kg	60-107		31 60-107	31
bis(2-Chloroethoxy)methane	111-91-1	170	17	ug/kg	51-89		30 51-89	30
bis(2-Chloroethyl)ether	111-44-4	170	17	ug/kg	50-96		33 50-96	33
bis(2-Chloroisopropyl)ether	108-60-1	170	17	ug/kg	44-94		32 44-94	32
4-Chlorophenyl phenyl ether	7005-72-3	170	17	ug/kg	60-101		26 60-101	26
1,2-Dichlorobenzene	95-50-1	170	33	ug/kg	47-91		35 47-91	35
1,2-Diphenylhydrazine	122-66-7	170	17	ug/kg	58-104		27 58-104	27
1,3-Dichlorobenzene	541-73-1	170	33	ug/kg	45-86		36 45-86	36
1,4-Dichlorobenzene	106-46-7	170	33	ug/kg	45-88		36 45-88	36
2,4-Dinitrotoluene	121-14-2	170	17	ug/kg	59-103		30 59-103	30
2,6-Dinitrotoluene	606-20-2	170	20	ug/kg	57-99		30 57-99	30
3,3'-Dichlorobenzidine	91-94-1	330	33	ug/kg	34-88		31 34-88	31
Dibenzo(a,h)anthracene	53-70-3	170	17	ug/kg	57-105		29 57-105	29
Dibenzofuran	132-64-9	170	17	ug/kg	58-103		27 58-103	27
Di-n-butyl phthalate	84-74-2	330	67	ug/kg	59-105		27 59-105	27
Di-n-octyl phthalate	117-84-0	170	33	ug/kg	59-117		28 59-117	28
Diethyl phthalate	84-66-2	330	67	ug/kg	59-106		27 59-106	27

Dimethyl phthalate	131-11-3	170	33 ug/kg	60-100	26 60-100	26
bis(2-Ethylhexyl)phthalate	117-81-7	330	67 ug/kg	57-111	29 57-111	29
Fluoranthene	206-44-0	170	17 ug/kg	60-110	32 60-110	32
Fluorene	86-73-7	170	17 ug/kg	60-99	30 60-99	30
Hexachlorobenzene	118-74-1	170	17 ug/kg	58-103	27 58-103	27
Hexachlorobutadiene	87-68-3	170	33 ug/kg	49-95	33 49-95	33
Hexachlorocyclopentadiene	77-47-4	170	73 ug/kg	36-94	41 36-94	41
Hexachloroethane	67-72-1	170	33 ug/kg	44-89	38 44-89	38
Indeno(1,2,3-cd)pyrene	193-39-5	170	17 ug/kg	57-104	33 57-104	33
Isophorone	78-59-1	170	17 ug/kg	58-97	30 58-97	30
1-Methylnaphthalene	90-12-0	170	17 ug/kg	55-93	33 55-93	33
2-Methylnaphthalene	91-57-6	170	17 ug/kg	57-103	32 57-103	32
2-Nitroaniline	88-74-4	170	33 ug/kg	53-106	29 53-106	29
3-Nitroaniline	99-09-2	170	33 ug/kg	29-85	31 29-85	31
4-Nitroaniline	100-01-6	170	33 ug/kg	49-104	31 49-104	31
Naphthalene	91-20-3	170	27 ug/kg	54-93	32 54-93	32
Nitrobenzene	98-95-3	170	17 ug/kg	53-92	32 53-92	32
N-Nitrosodimethylamine	62-75-9	330	70 ug/kg	37-88	34 37-88	34
N-Nitroso-di-n-propylamine	621-64-7	170	17 ug/kg	49-94	28 49-94	28
N-Nitrosodiphenylamine	86-30-6	170	17 ug/kg	53-107	28 53-107	28
Phenanthrene	85-01-8	170	17 ug/kg	61-103	32 61-103	32
Pyrene	129-00-0	170	17 ug/kg	58-109	33 58-109	33
Pyridine	110-86-1	330	67 ug/kg	30-68	38 30-68	38
1,2,4-Trichlorobenzene	120-82-1	170	17 ug/kg	52-93	32 52-93	32
2-Fluorophenol	367-12-4			Surrogate Limits:	40-102	
Phenol-d5	4165-62-2			Surrogate Limits:	41-100	
2,4,6-Tribromophenol	118-79-6			Surrogate Limits:	42-108	
Nitrobenzene-d5	4165-60-0			Surrogate Limits:	40-105	
2-Fluorobiphenyl	321-60-8			Surrogate Limits:	43-107	
Terphenyl-d14	1718-51-0			Surrogate Limits:	45-119	

72 compounds and 6 surrogates reported in list AB8270

Compound List Report
Product: P8081PESTTCL Pesticides, TCL
Matrix: SO Solid

Method List: P8081 SO
Report List: PTCL ALL
RL/MDL Factor: 0.33

Method Ref: SW846 8081B
Pesticide TCL List

LF17812
LJ1046

Compound	CAS No.	RL	MDL	Units	Control Limits (%) Rev: 07/31/08			
					MS/MSD	RPD	BS	DUP
Aldrin	309-00-2	1.7	0.43 ug/kg	57-118	27	57-118	27	
alpha-BHC	319-84-6	1.7	0.36 ug/kg	65-116	23	65-116	23	
beta-BHC	319-85-7	1.7	0.36 ug/kg	63-124	20	63-124	20	
delta-BHC	319-86-8	1.7	0.33 ug/kg	41-127	25	41-127	25	
gamma-BHC (Lindane)	58-89-9	1.7	0.4 ug/kg	68-121	22	68-121	22	
alpha-Chlordane	5103-71-9	1.7	0.36 ug/kg	69-120	33	69-120	28	
gamma-Chlordane	5103-74-2	1.7	0.36 ug/kg	70-123	34	70-123	34	
Dieldrin	60-57-1	1.7	0.36 ug/kg	69-122	25	69-122	25	
4,4'-DDD	72-54-8	3.3	0.43 ug/kg	63-135	28	63-135	28	
4,4'-DDE	72-55-9	3.3	0.4 ug/kg	66-127	28	66-127	28	
4,4'-DDT	50-29-3	3.3	0.43 ug/kg	66-142	28	66-142	28	
Endrin	72-20-8	3.3	0.4 ug/kg	69-135	24	69-135	24	
Endosulfan sulfate	1031-07-8	3.3	0.36 ug/kg	61-126	25	61-126	25	
Endrin aldehyde	7421-93-4	3.3	0.43 ug/kg	5-113	30	5-113	30	
Endrin ketone	53494-70-8	3.3	0.36 ug/kg	64-135	23	64-135	23	
Endosulfan-I	959-98-8	1.7	0.33 ug/kg	68-119	20	68-119	20	
Endosulfan-II	33213-65-8	1.7	0.33 ug/kg	65-124	19	65-124	19	
Heptachlor	76-44-8	1.7	0.4 ug/kg	65-123	26	65-123	26	
Heptachlor epoxide	1024-57-3	1.7	0.33 ug/kg	69-117	26	69-117	26	
Methoxychlor	72-43-5	3.3	0.66 ug/kg	66-139	23	66-139	23	
Toxaphene	8001-35-2	83	33 ug/kg	50-150	30	50-150	30	
Tetrachloro-m-xylene	877-09-8			Surrogate Limits: 46-122				
Decachlorobiphenyl	2051-24-3			Surrogate Limits: 50-133				

21 compounds and 2 surrogates reported in list PTCL

Compound List Report
Product: P8081PESTTCL Pesticides, TCL
Matrix: AQ Aqueous

Method List: P8081 AQ
Report List: PTCL ALL
RL/MDL Factor: 0.01

Method Ref: SW846 8081B
Pesticide TCL List

LF17679
LJ1046

Compound	CAS No.	RL	MDL	Units	Control Limits (%) Rev: 01/16/07			DUP
					MS/MSD	RPD	BS	
Aldrin	309-00-2	0.05	0.005 ug/l		72-122		16 72-122	16
alpha-BHC	319-84-6	0.05	0.005 ug/l		77-132		16 77-132	16
beta-BHC	319-85-7	0.05	0.005 ug/l		73-132		17 73-132	17
delta-BHC	319-86-8	0.05	0.005 ug/l		43-127		30 43-127	30
gamma-BHC (Lindane)	58-89-9	0.05	0.005 ug/l		80-136		17 80-136	17
alpha-Chlordane	5103-71-9	0.05	0.005 ug/l		75-131		16 75-131	16
gamma-Chlordane	5103-74-2	0.05	0.005 ug/l		79-136		17 79-136	17
Dieldrin	60-57-1	0.05	0.005 ug/l		80-136		16 80-136	16
4,4'-DDD	72-54-8	0.1	0.01 ug/l		64-154		25 64-154	25
4,4'-DDE	72-55-9	0.1	0.01 ug/l		65-146		21 65-146	21
4,4'-DDT	50-29-3	0.1	0.01 ug/l		62-143		28 62-143	28
Endrin	72-20-8	0.1	0.01 ug/l		75-139		15 75-139	15
Endosulfan sulfate	1031-07-8	0.1	0.01 ug/l		62-138		24 62-138	24
Endrin aldehyde	7421-93-4	0.1	0.01 ug/l		5-139		44 5-139	44
Endrin ketone	53494-70-8	0.1	0.01 ug/l		76-132		17 76-132	17
Endosulfan-I	959-98-8	0.05	0.005 ug/l		72-140		19 72-140	19
Endosulfan-II	33213-65-8	0.05	0.005 ug/l		75-139		16 75-139	16
Heptachlor	76-44-8	0.05	0.005 ug/l		71-143		15 71-143	15
Heptachlor epoxide	1024-57-3	0.05	0.005 ug/l		78-129		17 78-129	17
Methoxychlor	72-43-5	0.1	0.02 ug/l		63-140		20 63-140	20
Toxaphene	8001-35-2	2.5	1 ug/l		50-150		20 50-150	20
Tetrachloro-m-xylene	877-09-8				Surrogate Limits: 42-127			
Decachlorobiphenyl	2051-24-3				Surrogate Limits: 27-127			

21 compounds and 2 surrogates reported in list PTCL

Compound List Report

Product: P8082PCB Polychlorinated Biphenyls

Matrix: SO Solid

Method List: P8082 SO

Method Ref: SW846 8082A

LF16973

Report List: PCB ALL

PCB List

LF2924

RL/MDL Factor: 0.33

Compound	CAS No.	RL	MDL	Units	Control Limits (%) Rev: 04/25/07			
					MS/MSD	RPD	BS	DUP
Aroclor 1016	12674-11-2	17	6.6 ug/kg		69-117		26 69-117	26
Aroclor 1221	11104-28-2	17	8.3 ug/kg		60-140		30 60-140	30
Aroclor 1232	11141-16-5	17	8.3 ug/kg		70-130		30 70-130	30
Aroclor 1242	53469-21-9	17	6.6 ug/kg		70-130		30 70-130	30
Aroclor 1248	12672-29-6	17	6.6 ug/kg		70-130		30 70-130	30
Aroclor 1254	11097-69-1	17	6.6 ug/kg		70-130		30 70-130	30
Aroclor 1260	11096-82-5	17	6.6 ug/kg		71-121		30 71-121	30

Tetrachloro-m- 877-09-8

Surrogate Limits: 44-126

Decachlorobip 2051-24-3

Surrogate Limits: 39-157

7 compounds and 2 surrogates reported in list PCB

Compound List Report

Product: P8082PCB Polychlorinated Biphenyls

Matrix: AQ Aqueous

Method List: P8082 AQ

Method Ref: SW846 8082A

LF16970

Report List: PCB ALL

PCB List

LF2924

RL/MDL Factor: 0.01

Compound	CAS No.	RL	MDL	Units	Control Limits (%)		Rev: 04/25/07	
					MS/MSD	RPD	BS	DUP
Aroclor 1016	12674-11-2	0.5	0.2 ug/l		76-117		16 76-117	16
Aroclor 1221	11104-28-2	0.5	0.25 ug/l		60-140		30 60-140	30
Aroclor 1232	11141-16-5	0.5	0.25 ug/l		70-130		30 70-130	30
Aroclor 1242	53469-21-9	0.5	0.2 ug/l		70-130		30 70-130	30
Aroclor 1248	12672-29-6	0.5	0.2 ug/l		70-130		30 70-130	30
Aroclor 1254	11097-69-1	0.5	0.2 ug/l		70-130		30 70-130	30
Aroclor 1260	11096-82-5	0.5	0.2 ug/l		65-117		23 65-117	23

Tetrachloro-m-xyl 877-09-8

Surrogate Limits: 38-127

Decachlorobiphenyl 2051-24-3

Surrogate Limits: 25-137

7 compounds and 2 surrogates reported in list PCB

6010 AQ					6010 SO			
Parm_Syn	Units	DL	LOD	LOQ	Units	DL	LOD	LOQ
Aluminum	ug/l	25	25	200	mg/kg	1.2	1.25	10
Antimony	ug/l	2	2	6	mg/kg	0.1	0.1	1
Arsenic	ug/l	2	2	10	mg/kg	0.1	0.1	0.5
Barium	ug/l	5	5	200	mg/kg	0.5	0.5	10
Beryllium	ug/l	1	1	4	mg/kg	0.05	0.05	0.25
Cadmium	ug/l	1	1	5	mg/kg	0.05	0.05	0.2
Calcium	ug/l	100	100	1000	mg/kg	5	5	250
Chromium	ug/l	1	1	10	mg/kg	0.05	0.05	0.5
Cobalt	ug/l	1	1	50	mg/kg	0.05	0.05	2.5
Copper	ug/l	2	2	25	mg/kg	0.1	0.1	1.25
Iron	ug/l	35	50	300	mg/kg	1.7	2.5	15
Lead	ug/l	1	1	5	mg/kg	0.05	0.05	1
Magnesium	ug/l	100	100	5000	mg/kg	5	5	250
Manganese	ug/l	1	1	15	mg/kg	0.05	0.05	0.75
Molybdenum	ug/l	2	2	50	mg/kg	0.05	0.05	2.5
Nickel	ug/l	2	2	40	mg/kg	0.05	0.05	2
Potassium	ug/l	500	500	10000	mg/kg	25	25	500
Selenium	ug/l	2	2	10	mg/kg	0.2	0.2	1
Silver	ug/l	1	1	10	mg/kg	0.05	0.05	0.5
Sodium	ug/l	1900	2000	10000	mg/kg	55	100	500
Strontium	ug/l	1	1	10	mg/kg	0.05	0.05	0.5
Thallium	ug/l	1.85	2	10	mg/kg	0.13	0.25	0.5
Tin	ug/l	1	1	50	mg/kg	0.05	0.05	2.5
Titanium	ug/l	2	2	10	mg/kg	0.1	0.1	0.5
Vanadium	ug/l	1	1	50	mg/kg	0.05	0.05	2.5
Zinc	ug/l	5	5	20	mg/kg	0.25	0.25	1
Mercury (7470/7471)	ug/l	0.071		1	ug/kg	0.0103		0.083

Compound List Report
Product: H8151FL Herbicides, Full List
Matrix: AQ Aqueous

Method List: H8151 AQ
Report List: HERBFL ALL
RL/MDL Factor: 0.01

Method Ref: SW846 8151A
Herbicide List

LF1768
LF1448

Compound	CAS No.	RL	MDL	Units	Control Limits (%) Rev: 12/18/07			DUP
					MS/MSD	RPD	BS	
2,4-D	94-75-7	1	0.25 ug/l		40-140		30 40-140	30
2,4,5-TP (Silvex)	93-72-1	0.1	0.036 ug/l		40-140		30 40-140	30
2,4,5-T	93-76-5	0.1	0.019 ug/l		40-140		30 40-140	30
Dicamba	1918-00-9	0.1	0.025 ug/l		40-140		30 40-140	30
Dinoseb	88-85-7	2	0.5 ug/l		10-140		30 10-140	30
Dalapon	75-99-0	2.5	1 ug/l		20-140		30 20-140	30
Dichloroprop	120-36-5	1	0.21 ug/l		40-140		30 40-140	30
2,4-DB	94-82-6	1	0.44 ug/l		40-140		30 40-140	30
MCPP	93-65-2	100	13 ug/l		40-140		30 40-140	30
MCPA	94-74-6	100	19 ug/l		40-140		30 40-140	30
Pentachlorophenol	87-86-5	0.1	0.021 ug/l		40-140		30 40-140	30
2,4-DCAA	19719-28-9				Surrogate Limits:		40-140	

11 compounds and 1 surrogates reported in list HERBFL

Compound List Report

Product: H8151FL Herbicides, Full List

Matrix: SO Solid

Method List: H8151 SO
Report List: HERBFL ALL
RL/MDL Factor: 0.33

Method Ref: SW846 8151A
Herbicide List

LF17529
LF1449

Compound	CAS No.	RL	MDL	Units	Control Limits (%) Rev: 12/18/07			DUP
					MS/MSD	RPD	BS	
2,4-D	94-75-7	33	10	ug/kg	40-140		30 40-140	30
2,4,5-TP (Silvex)	93-72-1	3.3	1.1	ug/kg	40-140		30 40-140	30
2,4,5-T	93-76-5	3.3	1.1	ug/kg	40-140		30 40-140	30
Dicamba	1918-00-9	3.3	1.4	ug/kg	40-140		30 40-140	30
Dinoseb	88-85-7	83	17	ug/kg	10-140		30 10-140	30
Dalapon	75-99-0	170	33	ug/kg	20-140		30 20-140	30
Dichloroprop	120-36-5	33	12	ug/kg	40-140		30 40-140	30
2,4-DB	94-82-6	33	10	ug/kg	40-140		30 40-140	30
MCPP	93-65-2	3300	720	ug/kg	40-140		30 40-140	30
MCPA	94-74-6	3300	1000	ug/kg	40-140		30 40-140	30
Pentachlorophenol	87-86-5	3.3	0.78	ug/kg	40-140		30 40-140	30

2,4-DCAA	19719-28-9				Surrogate Limits:	40-140
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11 compounds and 1 surrogates reported in list HERBFL

Compound List Report

Product: V8260STD Volatile Organics

Matrix: AQ Aqueous

Nov 22, 2010 03:09 prr

Method List: VAIX826C Method Ref: SW846 8260B

LF17742

The 8260 Sim method will be used 1,4 Dioxane

Report List: V8260 ALL VOA 8260 List

LF3395

RL/MDL Factor: 1

Compound CAS No.	RL	MDL	Units	Control Limits (%) Rev: 10/23/10		BS	DUP
				MS/MSD	RPD		
Acetone 67-64-1		25	10 ug/l	59-134		14 59-134	14
Acrolein 107-02-8		20	5 ug/l	33-157		21 33-157	21
Acrylonitril 107-13-1		10	3 ug/l	62-124		13 62-124	13
Benzene 71-43-2		1	0.2 ug/l	83-124		11 83-124	11
Bromoben; 108-86-1		1	0.25 ug/l	83-115		10 83-115	10
Bromochlo 74-97-5		1	0.22 ug/l	78-112		10 78-112	10
Bromodich 75-27-4		1	0.2 ug/l	76-116		10 76-116	10
Bromoform 75-25-2		1	0.2 ug/l	68-128		11 68-128	11
n-Butylben 104-51-8		1	0.26 ug/l	84-124		10 84-124	10
sec-Butylb; 135-98-8		1	0.22 ug/l	86-127		10 86-127	10
tert-Butylb 98-06-6		1	0.27 ug/l	83-126		10 83-126	10
Chloroben; 108-90-7		1	0.2 ug/l	87-115		9 87-115	9
Chloroetha 75-00-3		2	0.5 ug/l	54-166		20 54-166	20
Chloroform 67-66-3		1	0.22 ug/l	85-123		10 85-123	10
o-Chloroto 95-49-8		1	0.22 ug/l	84-121		10 84-121	10
p-Chloroto 106-43-4		1	0.2 ug/l	84-120		10 84-120	10
2-Chloroet; 110-75-8		5	1.2 ug/l	63-125		24 63-125	24
Carbon dis; 75-15-0		2	0.5 ug/l	67-147		12 67-147	12
Carbon tet; 56-23-5		1	0.25 ug/l	74-139		13 74-139	13
1,1-Dichlor 75-34-3		1	0.25 ug/l	82-127		10 82-127	10
1,1-Dichlor 75-35-4		1	0.23 ug/l	75-133		13 75-133	13
1,1-Dichlor 563-58-6		1	0.28 ug/l	87-127		10 87-127	10
1,2-Dibrom 96-12-8		2	0.5 ug/l	61-118		15 61-118	15
1,2-Dibrom 106-93-4		1	0.37 ug/l	80-115		10 80-115	10
1,2-Dichlor 107-06-2		1	0.2 ug/l	76-122		11 76-122	11
1,2-Dichlor 78-87-5		1	0.25 ug/l	81-120		11 81-120	11
1,3-Dichlor 142-28-9		1	0.2 ug/l	81-113		11 81-113	11
2,2-Dichlor 594-20-7		1	0.44 ug/l	77-138		12 77-138	12
Dibromoch 124-48-1		1	0.2 ug/l	74-116		11 74-116	11
Dichlorodif 75-71-8		2	0.5 ug/l	34-158		22 34-158	22
cis-1,2-Dicl 156-59-2		1	0.26 ug/l	81-114		10 81-114	10
cis-1,3-Dicl 10061-01-5		1	0.2 ug/l	83-119		10 83-119	10
m-Dichloro 541-73-1		1	0.2 ug/l	86-115		9 86-115	9
o-Dichlorol 95-50-1		1	0.25 ug/l	85-115		9 85-115	9
p-Dichlorol 106-46-7		1	0.23 ug/l	87-113		10 87-113	10

trans-1,2-D 156-60-5	1	0.35 ug/l	82-126	10 82-126	10
trans-1,3-D 10061-02-6	1	0.2 ug/l	87-123	10 87-123	10
Ethylbenzene 100-41-4	1	0.2 ug/l	87-118	10 87-118	10
2-Hexanone 591-78-6	10	4 ug/l	58-125	14 58-125	14
Hexachlorocyclopentadiene 87-68-3	2	0.8 ug/l	71-133	12 71-133	12
Isopropylbenzene 98-82-8	1	0.2 ug/l	87-131	10 87-131	10
p-Isopropylbenzene 99-87-6	1	0.21 ug/l	83-125	9 83-125	9
4-Methyl-2-pentanone 108-10-1	5	2 ug/l	62-125	13 62-125	13
Methyl bromide 74-83-9	2	0.5 ug/l	55-151	21 55-151	21
Methyl chloride 74-87-3	2	0.5 ug/l	55-173	22 55-173	22
Methylene chloride 74-95-3	2	0.25 ug/l	81-116	10 81-116	10
Methylene sulfide 75-09-2	5	2 ug/l	69-125	11 69-125	11
Methyl ethyl ketone 78-93-3	5	2 ug/l	61-127	13 61-127	13
Methyl tert-butyl ether 1634-04-4	1	0.34 ug/l	75-116	10 75-116	10
Naphthalene 91-20-3	5	1 ug/l	59-125	15 59-125	15
n-Propylbenzene 103-65-1	1	0.2 ug/l	86-125	10 86-125	10
Styrene 100-42-5	1	0.2 ug/l	78-118	11 78-118	11
1,1,1,2-Tetrachloroethane 630-20-6	1	0.2 ug/l	81-119	10 81-119	10
1,1,1-Trichloroethane 71-55-6	1	0.2 ug/l	79-133	11 79-133	11
1,1,2,2-Tetrachloroethane 79-34-5	1	0.23 ug/l	71-120	11 71-120	11
1,1,2-Trichloroethane 79-00-5	1	0.22 ug/l	80-114	11 80-114	11
1,2,3-Trichloroethane 87-61-6	1	0.5 ug/l	64-126	16 64-126	16
1,2,3-Trichloroethane 96-18-4	2	0.3 ug/l	77-115	12 77-115	12
1,2,4-Trichlorobenzene 120-82-1	1	0.5 ug/l	68-123	11 68-123	11
1,2,4-Trimethylbenzene 95-63-6	2	0.27 ug/l	82-120	10 82-120	10
1,3,5-Trimethylbenzene 108-67-8	2	0.21 ug/l	83-123	10 83-123	10
Tetrachloroethene 127-18-4	1	0.25 ug/l	80-131	12 80-131	12
Toluene 108-88-3	1	0.2 ug/l	86-116	10 86-116	10
Trichloroethene 79-01-6	1	0.26 ug/l	85-124	10 85-124	10
Trichlorofluoromethane 75-69-4	2	0.5 ug/l	66-156	15 66-156	15
Vinyl chloride 75-01-4	1	0.22 ug/l	57-153	22 57-153	22
Vinyl Acetate 108-05-4	10	2 ug/l	38-159	11 38-159	11
m,p-Xylene 95-47-6	2	0.32 ug/l	86-121	10 86-121	10
o-Xylene 95-47-6	1	0.2 ug/l	83-121	10 83-121	10
1,4 dioxane	2	1 ug/kg	82-126	25 82-126	10

Dibromofluoromethane 1868-53-7
1,2-Dichloroethane 17060-07-0
Toluene-D8 2037-26-5
4-Bromofluorobenzene 460-00-4

Surrogate Limits: 87-116
Surrogate Limits: 76-127
Surrogate Limits: 86-112
Surrogate Limits: 84-120

69 compounds and 4 surrogates reported in list V8260

Compound List Report
Product: V8260STD Volatile Organics

Matrix: SO Solid

Nov 22, 2010 03:09 pm

Method List: VAIX8260 SO Method Ref: SW846 8260B LF17743

The 8260 Sim method will be used 1,4 Dioxane

Report List: V8260 ALL VOA 8260 List LF3395

RL/MDL Factor: 1

Compound	CAS No.	RL	MDL	Units	Control Limits (%) Rev: 10/23/10			
					MS/MSD	RPD	BS	DUP
Acetone	67-64-1	50	20 ug/kg	61-144	29	61-144		
Acrolein	107-02-8	25	11 ug/kg	27-156	39	27-156		
Acrylonitrile	107-13-1	25	11 ug/kg	55-144	24	55-144		
Benzene	71-43-2	5	1.5 ug/kg	78-130	25	78-130		
Bromobenzene	108-86-1	5	1.4 ug/kg	78-123	30	78-123		
Bromochloromethane	74-97-5	5	1.4 ug/kg	72-122	23	72-122		
Bromodichloromethane	75-27-4	5	1.1 ug/kg	73-122	25	73-122		
Bromoform	75-25-2	5	1.5 ug/kg	70-139	26	70-139		
n-Butylbenzene	104-51-8	5	1.3 ug/kg	80-138	31	80-138		
sec-Butylbenzene	135-98-8	5	1.6 ug/kg	82-132	29	82-132		
tert-Butylbenzene	98-06-6	5	1.2 ug/kg	79-130	29	79-130		
Chlorobenzene	108-90-7	5	1 ug/kg	83-122	23	83-122		
Chloroethane	75-00-3	5	2 ug/kg	61-153	31	61-153		
Chloroform	67-66-3	5	1.2 ug/kg	79-129	27	79-129		
o-Chlorotoluene	95-49-8	5	1.2 ug/kg	77-123	31	77-123		
p-Chlorotoluene	106-43-4	5	1.2 ug/kg	78-129	29	78-129		
2-Chloroethyl vinyl ether	110-75-8	25	10 ug/kg	52-142	25	52-142		
Carbon disulfide	75-15-0	5	2 ug/kg	61-142	27	61-142		
Carbon tetrachloride	56-23-5	5	1.8 ug/kg	79-135	29	79-135		
1,1-Dichloroethane	75-34-3	5	1.1 ug/kg	77-132	26	77-132		
1,1-Dichloroethylene	75-35-4	5	1.4 ug/kg	66-132	27	66-132		
1,1-Dichloropropene	563-58-6	5	1.3 ug/kg	81-133	26	81-133		
1,2-Dibromo-3-chloropropane	96-12-8	5	2.3 ug/kg	67-129	29	67-129		
1,2-Dibromoethane	106-93-4	5	1 ug/kg	77-126	24	77-126		
1,2-Dichloroethane	107-06-2	5	1 ug/kg	78-129	24	78-129		
1,2-Dichloropropane	78-87-5	5	1.2 ug/kg	74-127	27	74-127		
1,3-Dichloropropane	142-28-9	5	1 ug/kg	78-118	26	78-118		
2,2-Dichloropropane	594-20-7	5	1.4 ug/kg	80-137	28	80-137		
Dibromochloromethane	124-48-1	5	1 ug/kg	78-117	27	78-117		
Dichlorodifluoromethane	75-71-8	5	1.5 ug/kg	35-162	30	35-162		
cis-1,2-Dichloroethylene	156-59-2	5	1.5 ug/kg	74-123	26	74-123		
cis-1,3-Dichloropropene	10061-01-5	5	1 ug/kg	79-130	23	79-130		
m-Dichlorobenzene	541-73-1	5	1.2 ug/kg	82-126	29	82-126		

o-Dichlorobenzene	95-50-1	5	1.1 ug/kg	83-123	28 83-123
p-Dichlorobenzene	106-46-7	5	1.1 ug/kg	84-124	28 84-124
trans-1,2-Dichloroethyle	156-60-5	5	1.5 ug/kg	77-129	27 77-129
trans-1,3-Dichloroprope	10061-02-6	5	1.1 ug/kg	87-131	27 87-131
Ethylbenzene	100-41-4	5	1 ug/kg	82-124	25 82-124
2-Hexanone	591-78-6	25	5.4 ug/kg	67-130	29 67-130
Hexachlorobutadiene	87-68-3	5	2 ug/kg	77-150	36 77-150
Isopropylbenzene	98-82-8	5	1.1 ug/kg	82-133	27 82-133
p-Isopropyltoluene	99-87-6	5	1.2 ug/kg	82-132	29 82-132
4-Methyl-2-pentanone	108-10-1	25	5.5 ug/kg	69-125	24 69-125
Methyl bromide	74-83-9	5	2 ug/kg	60-146	31 60-146
Methyl chloride	74-87-3	5	2 ug/kg	58-163	26 58-163
Methylene bromide	74-95-3	5	1.5 ug/kg	75-128	26 75-128
Methylene chloride	75-09-2	10	4.6 ug/kg	62-140	25 62-140
Methyl ethyl ketone	78-93-3	25	6.1 ug/kg	66-134	23 66-134
Methyl Tert Butyl Ether	1634-04-4	5	2 ug/kg	70-131	25 70-131
Naphthalene	91-20-3	5	2 ug/kg	59-143	31 59-143
n-Propylbenzene	103-65-1	5	1.4 ug/kg	78-129	29 78-129
Styrene	100-42-5	5	2.6 ug/kg	79-123	28 79-123
1,1,1,2-Tetrachloroetha	630-20-6	5	1 ug/kg	81-121	25 81-121
1,1,1-Trichloroethane	71-55-6	5	1.1 ug/kg	80-133	27 80-133
1,1,2,2-Tetrachloroetha	79-34-5	5	1.2 ug/kg	70-128	30 70-128
1,1,2-Trichloroethane	79-00-5	5	1.1 ug/kg	76-118	28 76-118
1,2,3-Trichlorobenzene	87-61-6	5	1 ug/kg	78-136	34 78-136
1,2,3-Trichloropropane	96-18-4	5	1.7 ug/kg	74-125	30 74-125
1,2,4-Trichlorobenzene	120-82-1	5	1.2 ug/kg	82-137	32 82-137
1,2,4-Trimethylbenzene	95-63-6	5	1.1 ug/kg	77-129	29 77-129
1,3,5-Trimethylbenzene	108-67-8	5	1.3 ug/kg	79-129	31 79-129
Tetrachloroethylene	127-18-4	5	1 ug/kg	79-132	27 79-132
Toluene	108-88-3	5	1.2 ug/kg	80-123	26 80-123
Trichloroethylene	79-01-6	5	1.2 ug/kg	78-132	28 78-132
Trichlorofluoromethane	75-69-4	5	2 ug/kg	67-149	29 67-149
Vinyl chloride	75-01-4	5	1.5 ug/kg	60-145	29 60-145
Vinyl Acetate	108-05-4	25	14 ug/kg	25-164	35 25-164
m,p-Xylene		10	2.2 ug/kg	82-128	25 82-128
o-Xylene	95-47-6	5	1 ug/kg	82-126	25 82-126
1,4 -Dioxane		2	1 ug/kg	82-126	25 82-126

Dibromofluoromethane 1868-53-7

Surrogate Limits: 80-121

Toluene-D8 2037-26-5

Surrogate Limits: 71-130

4-Bromofluorobenzene 460-00-4

Surrogate Limits: 59-148

1,2-Dichloroethane-D4 17060-07-0

Surrogate Limits: 77-123

69 compounds and 4 surrogates reported in list V8260

Clean Harbors Kansas, LLC
Section J
Closure Plan
Appendix J-A - Tables

Appendix J-B
Example Engineer Resume

May 10, 2011
Revision No. 14

David S. Wilson, P.E., P.G.

Principal



David Wilson is a Principal with ERM based in Salt Lake City, Utah. Mr. Wilson has more than twenty years of experience in environmental and geotechnical engineering. He is experienced in site remediation and waste management, including regulatory compliance audits, due diligence, environmental assessments and site investigations, conceptual and final engineering design, construction, and QA/QC services.

Mr. Wilson has performed feasibility studies, final designs and construction observation services for a variety of environmental remediation projects for waste sites having contaminated sludges, debris, soil, surface water and ground water. He has designed closure systems for hazardous and solid waste sites requiring stabilization, closure by capping, installation of slurry walls, placement of geosynthetic materials, removal of wastes, and ground water contaminant recovery systems.

Mr. Wilson has both U.S. and international experience, including two years in Brazil. He is fluent in English, Spanish and Portuguese. His project work has included RI/FS and RD/RA for CERCLA sites, RFI/CMS for RCRA facilities, and TSCA closures for PCB sites.

Publications (Partial List)

- "Remediation and Redevelopment of Historical Metals Smelter Facility Midvale Slag Superfund Site - Operable Unit One Midvale," November 2007, V International Seminar on Remediation and Redevelopment of Contaminated Sites, Sao Paulo, Brazil.
- "USEPA Procedures for Establishing Environmental Screening and Cleanup Levels," April 2007, Panamerican Health Organization, Brasilia, Brazil.
- "Sediment Removal Action - Northwest Oil Drain Canal - Salt Lake City, Utah," January 2007, Battelle Sediment Conference, Savannah, Georgia.
- "Brownfield Redevelopment Solutions, Recovering a Communities Hidden Assets" Member of Envision Utah's consulting team for document development, 2006.

Professional Affiliations & Registrations

- Professional Engineer, 1993
- Professional Geologist, 1993
- Air & Waste Management Association
- Association of Engineering Geologists
- Society of American Military Engineers
- Utah Manufacturers Association
- Utah Mining Association
- Utah Pollution Prevention Association Board
- Rocky Mountain Fabricare Association
- ERM Foundation Board

Fields of Competence

- Geotechnical engineering
- Hydrogeology and groundwater monitoring
- Solid & Hazardous Waste Management
- Radioactive Waste Management
- Site Remediation
- Landfill siting and design
- RCRA/TSCA (PCB) Closures and Corrective Action
- Construction QA/QC engineering
- Geoenvironmental engineering
- Applications and geosynthetics design
- Regulatory compliance audits
- Environmental due diligence

Education

- M.S., Civil/Geotechnical Engineering, Drexel University, 1993
- B.S., Geological Engineering, University of Utah, 1988
- Utah UST Consultant Registration (since 1996)
- OSHA 40-hour Certification

Languages

- English, native speaker
- Spanish, fluent
- Portuguese, fluent

Key Projects

Directed feasibility study for heavy equipment company to evaluate best technologies for remediation of PCB-contaminated soil. Current work includes preparation of a bench-scale test for ozone-pile chemical oxidation of more than 10,000 drums of affected soil.

Provided engineering and hydrogeological support to a Utah-based LLRW landfill seeking a permit modification to convert part of a NORM cell into a Class A waste cell. Work included responses and engineering revisions to address comments from Utah DRC.

Provided oversight engineering and permitting support to the Skull Valley Band of Goshute Indians on whose land a private company was developing and operating a MSW balefill and C&D waste cell.

Director of sampling and closure certification program for the Coffeyville, Kansas hazardous waste (RCRA/TSCA) incinerator. This work included coordination with the owner, contractor, state regulators and EPA, and laboratory, to document the completion of activities in accordance with the Closure Plan.

Directed and certified the Construction Quality Assurance (CQA) for Cell 14 Closure and Cell 15 Phase 1B Construction at the Lone Mountain Hazardous Waste Landfill in Oklahoma.

Directed decontamination Sampling and Certification of Closure for PCB storage and treatment facility in Kansas City, Missouri for warehouse and tank farm areas.

Provided certification engineering and construction management services during closure of the Clive (Utah) hazardous waste and TSCA (PCB) incinerator, which included development of 14 closure reports for the closed units.

Engineering certification for closure and post-closure cost estimates for three Utah TSD facilities, including: Grassy Mountain Landfill Facility, the Aragonite Incinerator, and remaining Clive waste management operations.

Managed the construction quality assurance services for closure of three landfill cells (industrial and TSCA cells) at the Grassy Mountain hazardous waste landfill facility in Utah. Services included oversight and documentation of all construction activities.

Directed a Needs Assessment for Tooele County, Utah to assess the viability of a second landfill in the county for receipt of low-level nuclear waste and naturally occurring radioactive material (NORM).

Provided consultation and closure oversight for historic PCB transformer areas at Wyoming mining operation under the TSCA self implementation closure program.

Designed and oversaw construction for closure of an industrial, hazardous waste landfill at a chemical plant in Brazil. The landfill closure included waste dewatering, grading, gas venting, clay and synthetic liners, storm water management, and ground water monitoring.

Managed, engineered and directed QA services during closure of various RCRA units, including two mercury sludge impoundments, a drum storage pad, and a carbon tetrachloride storage tank at a Delaware chemical facility.

Provided engineering design and construction phase QA services during installation of a 500-foot long by 20-foot deep ground water recovery trench at a Pennsylvania Superfund Site for recovery and treatment of contaminated ground water.

Developed a Remedial Design Plan and managed the QA services during construction of a remediation project for a New York manufacturing plant for removal of PCBs and volatile organics from surface soils, sediment and shallow ground water.

Provided conceptual and final engineering design, followed by CQA services, for a landfill gas mitigation system to control the release of methane at a former New Jersey landfill located near a shopping center.

Performed an engineering evaluation of a closed hazardous waste landfill at a site in Colorado to determine the cause for cap movement. This study included geotechnical analysis of soil and geosynthetic components in the cap and evaluation of potential slope failure mechanisms.

Engineered a closure design and provided QA consulting services for a hazardous waste disposal site at an Iowa manufacturing facility, which involved installation of slurry walls, a synthetic membrane and asphalt pavement cap, and a gas collection system.

PROPOSAL
EVANS ENVIRONMENTAL CONSTRUCTION
13585 192ND STREET
COUNCIL BLUFFS, IOWA 51503
TELE: (712) 366-5834 FAX: (712) 366-5407
E-MAIL: evansenv@mcleodusa.net

DATE: September 7, 2001

PROJECT: AST Cleaning Services, 725 Service Center, Wichita, KS

CLIENT: Safety Kleen Corp. Rusty Dunn
Ph 316 269-7400 Fx 316 269 7455 Rusty Dunn

EEC ESTIMATOR: Jeff Evans

SCOPE OF WORK:

Mobilize to site. Primary task will be the cleaning of Tanks V-9, 10, 11, 12, 13, 14, 15a, 15b, 15c, 15d and 16. All tanks shall be "cold-cut" as necessary to permit entry. EEC will assist Client with sampling if applicable. All rinseates and sludges will be placed in vessels/containers provided by Client. Client shall pay for all disposal and analytical. All work shall be performed in strict compliance with OSHA, NFPA, and API protocol including confined space procedures.
Demobilize.

All EEC employees shall be 40 Hr-Certified for Hazardous Waste Operations per OSHA 1910.120

COST OF WORK:

1. Mobilization/demobilization	1,500.00
2. Total project as described above	17,600.00

SUBMITTED BY:

ACCEPTANCE:

SIGNATURE:

SIGNATURE:

TITLE:

TITLE:

DATE:

DATE:

Phone (712)527-1440
Fax (712) 527-1442
58823 Railroad Avenue
Glenwood, IA 51534

Glenwood, IA 51534

Date	Invoice #
11/15/2001	115996

Safety-Kleen Corp.
2549 N. New York
Wichita, KS 67219
Attention: Rusty Dunn

**AST Cleaning Services, 725
Service Center, Wichita, KS**

11/15/2001

Description	Amount																												
1. Mobe/Demobe	1,500.00																												
2. Cleaning services , as bid	17,600.00																												
CHANGES IN SCOPE																													
A. Removed "more than double" quantity of sludge from tanks than specified	0.00																												
NO CHARGE																													
<table><tr><td>Date Rcvd:</td><td>11/25</td><td>PO#</td><td>115029</td></tr><tr><td>Vendor #</td><td>32653</td><td>Amount</td><td></td></tr><tr><td>G/L Discrib 725</td><td>222.05655.206</td><td></td><td></td></tr><tr><td>G/L Discrib 725</td><td>885.084</td><td>19,100.00</td><td>DR</td></tr><tr><td>G/L Discrib 725</td><td></td><td></td><td></td></tr><tr><td></td><td>Total</td><td>19,100.00</td><td>SD</td></tr><tr><td>Accrued</td><td>11/20/01</td><td>Int</td><td></td></tr></table>		Date Rcvd:	11/25	PO#	115029	Vendor #	32653	Amount		G/L Discrib 725	222.05655.206			G/L Discrib 725	885.084	19,100.00	DR	G/L Discrib 725					Total	19,100.00	SD	Accrued	11/20/01	Int	
Date Rcvd:	11/25	PO#	115029																										
Vendor #	32653	Amount																											
G/L Discrib 725	222.05655.206																												
G/L Discrib 725	885.084	19,100.00	DR																										
G/L Discrib 725																													
	Total	19,100.00	SD																										
Accrued	11/20/01	Int																											
Total \$19,100.00																													

14 125443

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements**

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K-3 Notice in Deed:.....	3

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Appendix K-A, Financial Assurance Information
Appendix K-B, Certificate of Insurance for Closure or Post Closure Care
Appendix K-C, Hazardous Waste Certificate of Insurance
Appendix K-D, Notice in Deed

List of Acronyms

Clean Harbors Kansas, LLC (CHK)
Certificate of Insurance for Closure or Post Closure Care (CI)
Treatment, Storage and Disposal (TSD)
Kansas Administrative Regulations (KAR)

**July 11, 2008
Revision No. 11**

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements**

K-1 Financial Assurance: 40 CFR 264.143

Clean Harbors Kansas, LLC (CHK) has chosen to use a Certificate of Insurance for Closure or Post Closure Care (CI) to meet facility closure financial assurance requirements. The CI is currently issued by Steadfast Insurance Company of Schaumburg, Illinois.

Appendix K-A, Financial Assurance Information, summarizes facility information, funds assured for closure, and details regarding the CI. The CI is amended annually for inflation as required by 40 CFR 264.142(b) for hazardous waste Treatment, Storage, and Disposal (TSD) facilities operating under a Hazardous Waste Permit. The facility closure cost estimate and corresponding funding instrument will be adjusted on an annual basis for: 1) inflation; and 2) whenever facility changes affecting closure costs occur. A copy of the CI is presented in Appendix K-B, Certificate of Insurance for Closure or Post Closure Care.

One of the options specified in 40 CFR 264.143 paragraphs (a) through (f) must be established to provide financial assurance for closure of a TSD facility. CHK may convert the financial instrument described above to an alternate option specified by federal regulations.

**July 11, 2008
Revision No. 11**

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements**

K-2 Insurance Coverage: 40 CFR 264.147

CHK maintains insurance policies to cover general liability, automobile liability, workers compensation, employers' liability and environmental impairment liability (pollution legal liability). The environmental impairment liability includes both sudden and non-sudden pollution coverage. A copy of the Hazardous Waste Facility Certificate of Insurance for accidental occurrences is presented in Appendix K-C, Hazardous Waste Certificate of Insurance.

**July 11, 2008
Revision No. 11**

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements**

K-3 Notice in Deed: 40 CFR 119(b)(1)

In compliance with Kansas Administrative Regulations (KAR) 28-31-8(c) and in anticipation of Post-closure Notices required of TSDFs, CHK has submitted correspondence dated April 16, 1991 regarding property use for hazardous waste management activities to the Registrar of Deeds for Sedgwick County. Copies of these documents are presented in Appendix K-D, Notice in Deed.

**July 11, 2008
Revision No. 11**

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements
Appendix K-A - Financial Assurance Information**

**Appendix K-A
Financial Assurance Information**

**July 11, 2008
Revision No. 11**

Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements
Appendix K-A - Financial Assurance Information

Facility Information

EPA ID NO: KSD007246846
Facility Name: Clean Harbors Kansas, LLC
Facility Location: 2549 North New York, Wichita, Kansas 67219

Certificate of Insurance for Closure or Post Closure Care (CI)

CI Policy Number: [REDACTED] Ex. 4
Issuing Institution: Steadfast Insurance Company, Schaumburg, IL
Execution Date: September 6, 2006
Funds Assured: \$ 1,698,848

**KANSAS CERTIFICATE OF INSURANCE
FOR CLOSURE OR POST-CLOSURE CARE**

Name and Address of Insurer
(herein called the "Insurer"):

Steadfast Insurance Company
1400 American Lane
Schaumburg, Illinois 60196

Name and Address of Insured
(herein called the "Insured"):

Clean Harbors, Inc.
42 Longwater Drive
Norwell, MA 02061

Facilities Covered:

EPA Identification No. KSD 981-506-025
Clean Harbors PPM, LLC
2474 Highway 169 North Industrial Park
Coffeyville, KS 67337
Closure Costs: \$2,242,285
Corrective Action Costs : \$2,407,578

EPA Identification No. KSD 007-246-846
Clean Harbors Kansas, LLC
2549 North New York Street
Wichita, KS 67219
Closure Costs: \$1,698,848

Face Amount:

\$6,348,711

Policy Number:

[REDACTED]

Ex. 4

Effective Date:

September 6, 2006

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 40 CFR 264.143(e), 264.145(e), 265.143(d), and 265.145(d), as applicable and as such regulations were constituted on the date shown immediately

below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Secretary of the Kansas Department of Health and Environment, the Insurer agrees to furnish to the Secretary a duplicate original of the policy listed above, including all endorsements thereon.

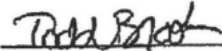
I hereby certify that the wording of this certificate is identical to the wording specified in 40 CFR 264.151(e) as such regulations were constituted on the date shown immediately below.



Chris DeLauder – Regional Vice President

Authorized Representative of: Steadfast Insurance Company
Administrative Officer
1400 American Lane
Schaumburg, IL 60196-1056

Signature of witness or notary:



Date:

4/2/2008

CERTIFICATE HOLDER

Secretary of the Kansas Department of Health & Environment
Kansas Department of Health & Environment
Bureau of Waste Management
1000 SW Jackson, Suite 320
Topeka, KS 66612

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements
Appendix K-B - Certificate of Insurance**

Appendix K-B

Certificate of Insurance for Closure or Post Closure Care

**July 11, 2008
Revision No. 11**

Client#: 2749

CLEANH05

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

9/6/06

PRODUCER

William Gallagher Associates
Insurance Brokers, Inc.
470 Atlantic Avenue
Boston, MA 02210

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION
ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE
HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR
ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

Clean Harbors Environmental Services
Inc. Its Subsidiary
& Affiliated Companies
42 Longwater Drive Norwell, MA 02061

INSURERS AFFORDING COVERAGE

NAIC #

INSURER A: Steadfast Insurance Company

26367

INSURER B:

INSURER C:

INSURER D:

INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

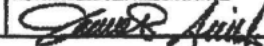
INSR ADDL LTR INDR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
	GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJ <input type="checkbox"/> LOG				EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (EA OCCURRENCE) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMPROP AGG \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (EA accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE \$ RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	Ex. 4			WC STATUTORY LIMITS <input type="checkbox"/> OTHER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	OTHER Closure, Post Closure, Corrective Action		9/6/06	9/6/09	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

CERTIFICATE HOLDER**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE



ACORD 25 (2001/08)

#S88105/M88046

JJH

© ACORD CORPORATION 1988

***Certificate of Closure Insurance
Attachment A***

INSURER:	Steadfast Insurance Company, a Subsidiary of Zurich-American Insurance Group (Best's Rating: A XV)
INSURED:	Clean Harbors, Inc. & Subsidiaries 42 Longwater Drive Norwell, MA 02061
POLICY PERIOD:	9/6/06 – 9/06/09
COVERED FACILITIES:	The coverage afforded under this policy applies to the following facilities:

State	Facility	EPA Identification No.	Policy
Redacted to remove non-responsive information			
KS	Clean Harbors Kansas, LLC 2549 N. New York St., Wichita, KS 67219	KSD007246846	Ex. 4

redacted to remove non-responsive information			
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Clean Harbors Kansas, LLC

RCRA Permit Application

Section K

Financial Requirements

Appendix K-C - Hazardous Waste Certificate of Insurance

Appendix K-C

Hazardous Waste Certificate of Insurance

July 11, 2008
Revision No. 11

PRODUCER Willis North America, Inc. 26 Century Blvd Nashville, TN 37214		THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED Clean Harbors Environmental Services, Inc. and its affiliates. 42 Longwater Drive Norwell, MA 02061		INSURERS AFFORDING COVERAGE	
		INSURER A	Zurich American Insurance Company
		INSURER B	American Guarantee and Liability Insurance
		INSURER C	Steadfast Insurance Company
		INSURER D	
		INSURER E	
		NAIC#	

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY	Ex. 4	11/1/2007	11/1/2008	EACH OCCURRENCE
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				\$2,000,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				DAMAGE TO RENTED PREMISES (Ea occurrence)
	<input checked="" type="checkbox"/> XCU				\$ 100,000
	<input checked="" type="checkbox"/> Contractual				MED EXP (Any one person)
	GEN'L AGGREGATE LIMIT APPLIES PER:				\$ 5,000
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC				PERSONAL & ADV INJURY
					\$2,000,000
A	AUTOMOBILE LIABILITY	Ex. 4	11/1/2007	11/1/2008	COMBINED SINGLE LIMIT
	<input checked="" type="checkbox"/> ANY AUTO				\$5,000,000
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per person)
	<input type="checkbox"/> SCHEDULED AUTOS				\$
	<input type="checkbox"/> HIRED AUTOS				BODILY INJURY (Per accident)
	<input type="checkbox"/> NON-OWNED AUTOS				\$
	<input checked="" type="checkbox"/> MCS-90				PROPERTY DAMAGE
					\$
	GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT
	<input type="checkbox"/> ANY AUTO				\$
	<input type="checkbox"/>				OTHER THAN AUTO ONLY
	<input type="checkbox"/>				\$
	<input type="checkbox"/>				EACH ACCIDENT
	<input type="checkbox"/>				\$
	<input type="checkbox"/>				AGGREGATE
	<input type="checkbox"/>				\$
B	EXCESS LIABILITY	Ex. 4	11/1/2007	11/1/2008	EACH OCCURRENCE
	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				\$10,000,000
	<input type="checkbox"/> DEDUCTIBLE				AGGREGATE
	<input type="checkbox"/> RETENTION \$				\$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Ex. 4	11/1/2007	11/1/2008	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTH ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				E.L. EACH ACCIDENT
					\$ 2,000,000
					E.L. DISEASE-EA EMPLOYEE
		\$ 2,000,000			
C	OTHER Contractors Pollution Liability	Ex. 4	11/1/2007	11/1/2008	\$10,000,000
					\$10,000,000
C	DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS Environmental Impairment Liability #PLC374393608 5/1/08-11/1/08 \$10,000,000 Each Claim/Aggregate				

CERTIFICATE HOLDER

CANCELLATION

For Reference Purposes Only

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section K
Financial Requirements
Appendix K-D - Notice in Deed**

Appendix K-D

Notice in Deed

**July 11, 2008
Revision No. 11**

Sedgwick County Courthouse
4th Floor
Registrar of Deeds
525 N. Main
Wichita, Ks. 67203

4/16/91

Dear Registrar of Deeds

This letter serves as official owner notification for the property :
at 2549 N. New York Ave., HRI operated property.

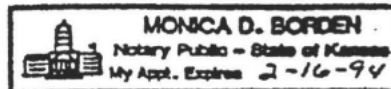
North Industrial Park Fourth Addition,

block 2, lot 1

Key Number
87-0- -B-1 3826-012583-6703

This is in accordance with Kansas environmental regulation K.A.R.
28-31-8c. This property has been used to manage hazardous waste
and all records regarding permits, closure or both are available
for review at the Kansas Department of Health and Environment
offices in Topeka.

David Trombold
David Trombold
Vice President
Associated Chemical, Inc.



Monica D. Borden
9-13-91

For an acknowledgment in a representative capacity:

State of Kansas

(County) of Sedgwick

This instrument was acknowledged before me on

September 13, 1991

by David Trombold

as Vice President

of Associated Chemical, Inc.

Monica D. Borden
(Signature of notarial officer)

Title (and Rank)

Sedgwick County Courthouse
4th Floor
Registrar of Deeds
525 N. Main
Wichita, Ks. 67203

4/16/91

Dear Registrar of Deeds

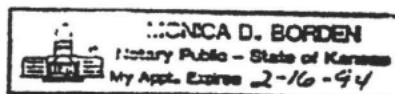
This letter serves as official owner notification for the property
at 2549 N. New York Ave., HRI operated property.

North Industrial Park Fourth Addition,

	Key Number
block 1, lot 2	89-0- -B-13819-060842-6703
lot 3	89-0- -B-13820-026393-6703
lot 4	89-0- -B-13821-026394-6703
lot 5	89-0- -B-13822-026395-6703

This is in accordance with Kansas environmental regulation K.A.R.
28-31-8c This property has been used to manage hazardous waste and
all records regarding permits, closure or both are available for
review at the Kansas Department of Health and Environment offices
in Topeka.

David Trombold
David Trombold



Monica D. Borden
9-13-91

For an acknowledgment in a representative capacity:
State of Kansas
(County) of Sedgwick

This instrument was acknowledged before me on

September 13, 1991
by David Trombold
as Vice President
of Associated Chemical, Inc.

Monica D. Borden
(Signature of notarial officer)

Title (and Rank)

Clean Harbors Kansas, LLC
RCRA Permit Application
Section L
Solid Waste Management Units and Corrective Action
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L-1a <u>Description of Solid Waste Management Units:</u>	Page 2
L-2 <u>Information Pertaining to Releases:</u>	Page 3
L-3 <u>Superfund Activities</u>	Page 4

February 10, 2012
Revision No. 15

Clean Harbors Kansas, LLC
RCRA Permit Application
Section L
Solid Waste Management Units and Corrective Action

List of Figures

Figure L.1, Location of SWMUs, AOCs, and OAs -

List of Appendices

Appendix L-A, RCRA Facility Investigation report
Appendix L-B, SWMU, AOC, OA
Appendix L-C RFI Addendum

Acronym Table

Solid Waste Management Unit (SWMU)
Clean Harbors Kansas, LLC (CHK)
Kansas Administrative Regulations (KAR)
United States Environmental Protection Agency (USEPA)

February 10, 2012
Revision No. 15

**Clean Harbors Kansas, LLC
RCRA Permit Application
Section L
Solid Waste Management Units and Corrective Action**

L-1 Information Requirements for Solid Waste Management Units: 40 CFR 270.14(d)

The purpose of this section is to provide information regarding the Solid Waste Management Unit (SWMU)s at the Clean Harbors Kansas, LLC facility located in Wichita, Kansas. This section is provided to fulfill the requirements of the Kansas Administrative Regulations (KAR), Title 28, Article 31 and 40 CFR Part 270. Article 31, Hazardous Waste Management Standards and Regulations, of the KAR incorporates, with few additions, the RCRA regulations contained in 40 CFR Parts 260 through 270. Therefore, this section will refer only to the federal regulations. A copy of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) of the Clean Harbors Kansas, LLC facility (the facility) is located in Appendix L-A .The site was formerly owned by Safety-Kleen (Wichita), Inc. The subject site is located at 2549 New York Avenue, in an industrialized area of Wichita. The RFI report was originally submitted to the United States Environmental Protection Agency (USEPA) and the Kansas Department of Health and Environment (KDHE) on January 20, 2003. The revised RFI report was submitted in October 2004. An RFI Addendum was submitted to the agencies on August 29, 2005 and additional amended text for inclusion in the RFI was submitted on January 20, 2006. The RFI and RFI Addendum were approved with comment by the EPA on April 28, 2006. Clean Harbors Kansas continues to work with KDHE and USEPA as part of

**February 10, 2012
Revision No. 15**

Clean Harbors Kansas, LLC
RCRA Permit Application
Section L
Solid Waste Management Units and Corrective Action

the on-going corrective action program.

L-1a Description of Solid Waste Management Units: 40 CFR 270.14(d)(1)

Type, Location and Description of the SWMUs:

Appendix L-B lists the location and general description of all SWMU located on site. In addition, Figure L-1 illustrates the location of each SWMU within the facility as required by 40 CFR 270(b)(19). Waste characterization information is contained inside the excerpt in appendix L-A.

Dates of Operation:

CHK is an existing waste management facility. However, the site has been used for other business purposes by companies which have sequentially located at the site for some forty years. The industrial district of the area developed over the past 95 years. The history of hazardous waste operations under EPA ID No. KSD007246846 began in 1979 with Reid Supply Co., Inc. Conservation Services, Inc. purchased certain assets, including the permit (e.g., from Reid Supply Co. in 1986. Subsequently, Hydrocarbon Recyclers, Inc. (HRI), a subsidiary of U.S. Pollution Control, Inc. (USPCI), acquired Conservation Services, Inc. in 1988. USPCI was owned by Union Pacific Corporation

February 10, 2012
Revision No. 15

Clean Harbors Kansas, LLC
RCRA Permit Application
Section L
Solid Waste Management Units and Corrective Action

from 1988 through 1994. Laidlaw Environmental Services (LES) purchased USPCI in 1995; LES changed the name to Safety-Kleen (SK) Inc. after acquiring SK in 1998. Effective September 7, 2002, Clean Harbors, Inc. purchased from Safety-Kleen Services, Inc. the Wichita site

Description of Wastes:

The CHK facility stores, treats, and recovers for recycling hazardous and nonhazardous wastes. The types of wastes managed in the RCRA regulated SWMUs are identified in Sections A (Part A Application) and C (Waste Characterization). The sampling and analysis provisions for managing these waste types are provided in Appendix C-A (Waste Analysis Plan) of Section C.

L-2 Information Pertaining to Releases: 40 CFR 270.14(d)(2)

CHK is not aware of any releases of hazardous waste or hazardous waste constituents from regulated units within the facility. Therefore, the information required under 40 CFR 270.14(d)(2) is not available (i.e., 40 CFR 270.14(d)(2) is not applicable).

February 10, 2012
Revision No. 15

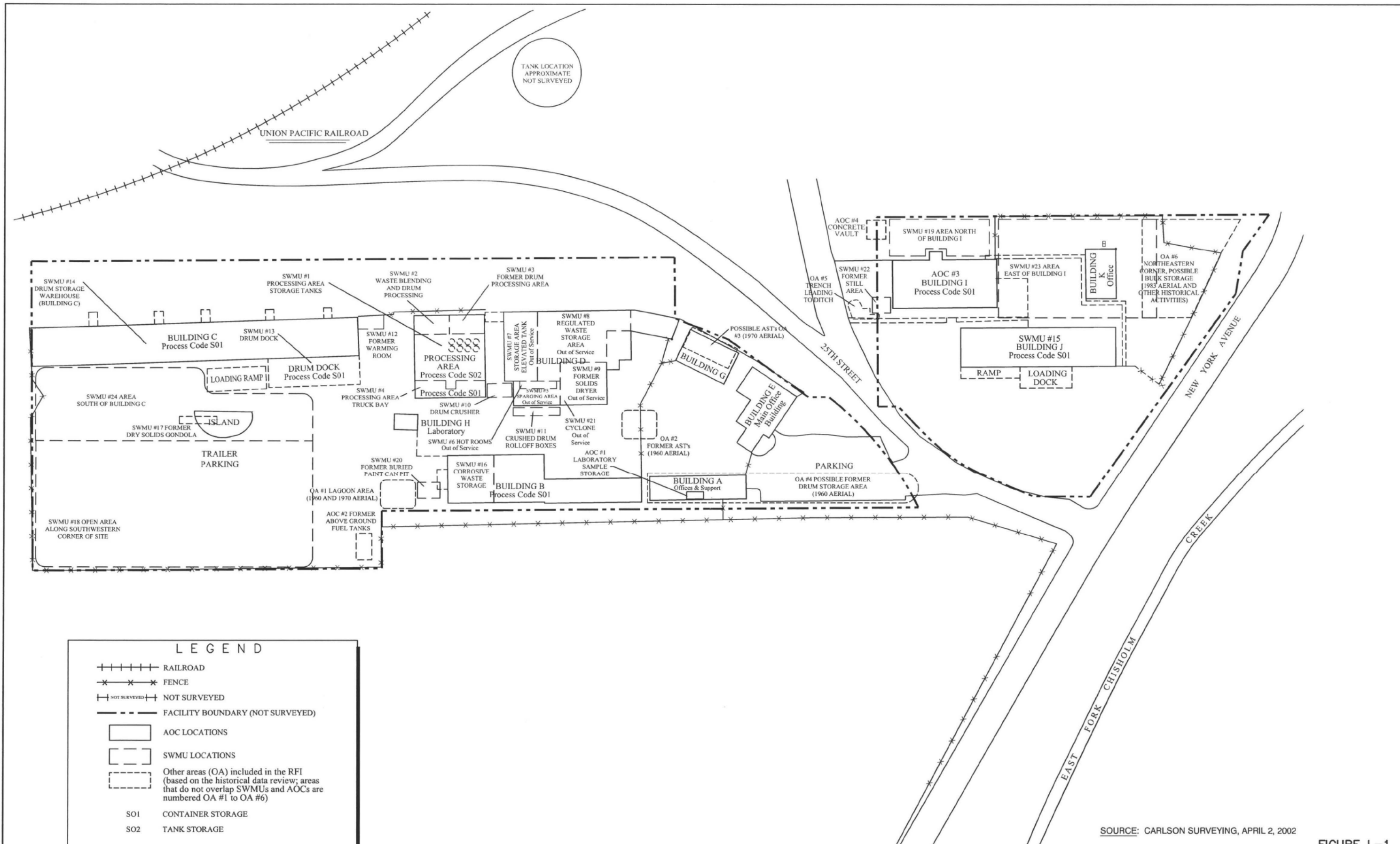
Clean Harbors Kansas, LLC
RCRA Permit Application
Section L
Solid Waste Management Units and Corrective Action

A site inspection for the purpose of identifying potential SWMUs was completed by B. & V. Waste Science and Technology Corporation under contract Number 68-W9-0006 to United States Environmental Protection Agency (USEPA) Region VII in 1990

L-3 Superfund Activities

The CHK facility is located within the area identified as the North Industrial corridor .Environmental Response, Compensation, and Liability Act or "Superfund" site in the Wichita North Industrial District. The facility RFI report is attached as Appendix L-A

February 10, 2012
Revision No. 15



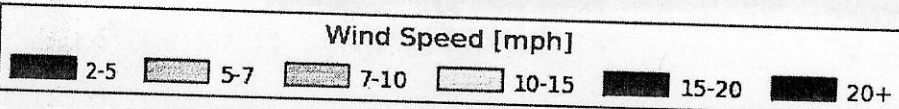
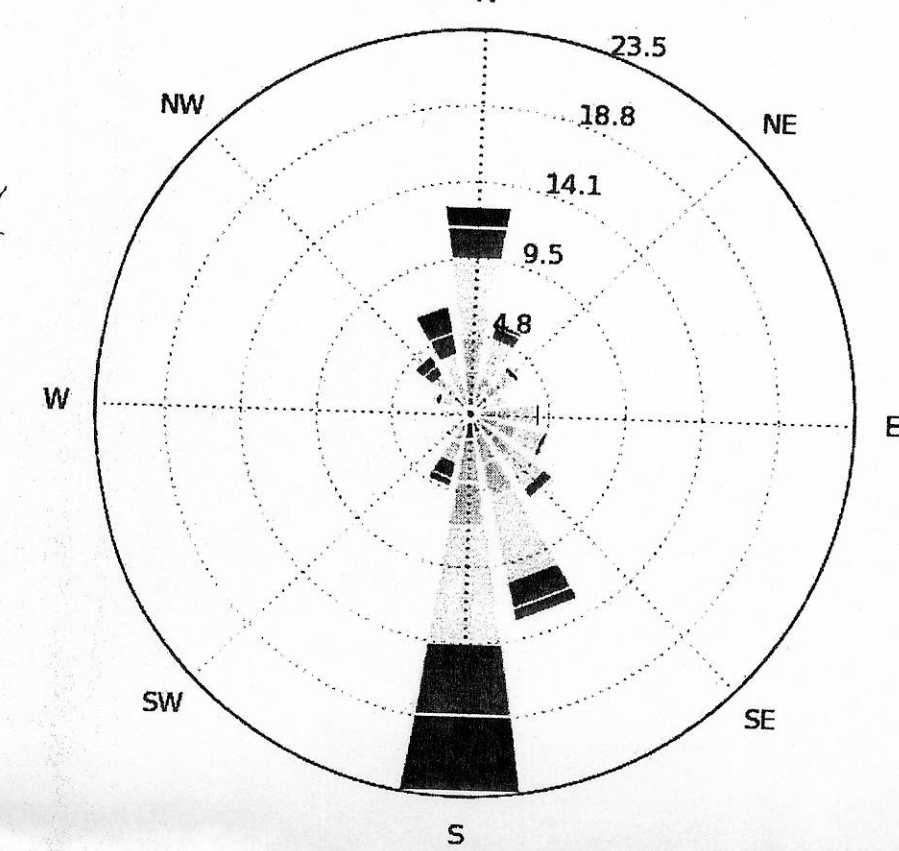
SOURCE: CARLSON SURVEYING, APRIL 2, 2002

FIGURE L-1

							 <small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS KANSAS, LLC. ANY REPRODUCTION, DISTRIBUTION, FURTHER COPY, OR USE WITHOUT WRITTEN PERMISSION OF OWNER.</small>	TITLE CLEAN HARBORS KANSAS, LLC WICHITA FACILITY SWMU's				
	C	RCRA PART B SUBMITTAL UPDATE	K.M.C.	8/12/10	S.A.B.							
	B	RCRA PART B SUBMITTAL UPDATE	K.M.C.	3/27/09	M.C.							
	A	RCRA PART B SUBMITTAL	K.M.C.	6/20/08	M.C.							
REFERENCE DRAWINGS	REV.	DESCRIPTION	DRAWN	DATE	DATE	APPR.	DRAIN	CHECKED	SCALE	DATE	DRAWING NO.	
							K.M.C.	M.C.	AS NOTED	06/18/08		SWMU

Full Site Survey Clean Harbors, Wichita, Kansas

WICHITA (ICT) Windrose Plot
[All Year]
Period of Record: 01 Jan 2010 - 31 Dec 2010
Number of Obs: 9779 Calm: 7.7% Avg Speed: 11.1 mph



- LEGEND**
- SK-125 = Groundwater Monitoring Well
 - ☆ = Light Pole
 - ⊙ = Power Pole
 - ⊕ = Water Valve
 - ⊕ = Fire Hydrant
 - ⊕ = Fire Protection Siamese
 - ⊕ = Guy Anchor
 - ⊕ = Sanitary Sewer Manhole
 - ⊕ = Storm Water Manhole
 - ⊕ = Facility Boundary (NOT Surveyed)
 - ⊕ = Sanitary Sewer Pipe
 - ⊕ = Storm Water Pipe
 - ⊕ = Fence
 - ⊕ = Existing Surface Contour Major (5')
 - ⊕ = Existing Surface Contour Minor (1')
 - ⊕ = Guard Rail
 - ⊕ = Overhead Electric
 - ⊕ = Asphalt Pavement
 - ⊕ = Concrete Pavement
 - ⊕ = Gravel
 - ⊕ = AOC LOCATIONS
 - ⊕ = Other Areas (OA) Locations
 - ⊕ = SWMU Locations

- Building Legend**
- Building "A" = Administration
 - Building "B" = Warehouse/Supply Storage
 - Building "C" = Hazardous Waste Management Building
 - Building "D" = Warehouse/Supply Storage
 - Building "E" = Administration
 - Building "F" = Operations Office/Break Room
 - Building "G" = Operations Office/Break Room
 - Building "H" = Hazardous Waste Management Building
 - Building "I" = Warehouse/Supply Storage
 - Building "J" = Mechanical Equipment Building
 - Building "K" = Hazardous Waste Management Building
 - Process Area = Hazardous Waste Management Building
 - Drum Dock = Hazardous Waste Management Building
- Zone AE: The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

- SURVEY NOTES:**
- Access to offsite areas was limited, therefore the City of Wichita LIDAR contours were utilized and field verified where accessible. The Site and 1000' perimeter falls in Zone X of the floodplain except for Zone AE as shown hereon.
 - Zone "X" are areas of 0.2% annual chance flood.
 - FEMA Flood Insurance Rate Map (FIRM) #20173C0355E with an effective date of February 2, 2007 was utilized in determining the different floodplain zones.
 - Site is Zoned GI (General Industrial).
 - Clean Harbors Property occupies Lots 2, 3, 4, 5 of Block 1 and Lot 2 of Block 2 of North Industrial Park Fourth Addition, Wichita, KS. (Taken from the Sedgewick County GIS website)
 - Operational Unit Locations (AOC, SWMU, & OA) Areas and descriptions were provided by Cameron-Cole.

		Full Site Survey Cameron-Cole 5777 Central Ave, Ste 200 Boulder, CO 80301	
1224 N. Andover Rd. Ste 100, Andover, KS 67002 P:316-425-7770 F:316-425-7773 ENGINEERING SURVEYING GIS MAPPING			
PROJECT NUMBER 11-06-641		SURVEYED BY TPH	
REVISIONS: 06-16-2011 Operational Unit Locations		APPROVED BLP DATE 06/13/2011	
SCALE 1:120		SHEET 1 OF 1	
K:\CAD\Full Site Survey\11-06-641_Clean_Harbor\11-06-641_FSS_CLEAN_HARBORS.dwg			

